Pluractional auxiliaries in an event-based semantics

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A well-known observation about the present perfect in Portuguese is the fact that it denotes repeated events (Giorgi & Pianesi 1997, Squartini 1998, Schmitt 2001, Laca 2010), hence the contrast between (1) and (2):

(1)	O	João	tem	saído	tarde
	the	João	aux-PRS.3P.SG	leave-PRF.PTCP	late

(2) #	O	João	tem	morrido
	the	João	aux-PRS.3P.SG	die-PRF.PTCP

As pointed out by Schmitt (2001), sentence (1) is necessarily iterative, meaning that 'João has left late many times' or that 'lately, João has been leaving late'. By contrast, a sentence in the present perfect denoting a necessarily unique event, like *dying* in (2), is semantically ill-formed. Similar examples have been reported in (i) Galician (Rojo 1974, Álvarez & Xove 2002); (ii) Asturian (ALA 1998); and (iii) northwestern varieties of European Spanish, in areas of contact with Galician (Rojo 2005) and Asturian (Harre 1991).

From the point of view of formal syntax-semantics, these constructions have been analyzed in two ways: first, Giorgi & Pianesi (1997) proposed that *ter* in the Portuguese perfect tense is a main verb, and derived the iterative reading from a hidden habitual operator ɢᴇɴ in the participial clause; later on, Schmitt (2001) gave a series of syntactic arguments against Giorgi & Pianesi's claim that *ter* is a main verb in (1), analyzing it as an auxiliary instead; also, following de Swart (1998), she derived the iterative reading from a function ITER that is there to fix the mismatch between the bounded output of the Perfect and the selectional requirement on Tense to select states. Schmitt's analysis makes the crucial prediction that iterative readings of an event will only be required under present tense inflection: this seems to be true for European Portuguese only (in this respect, see Molsing 2006 on Brazilian Portuguese).

In this talk, I want to contribute to our current understanding of constructions of type (1) by presenting a semantic analysis that gives them a place in event-based accounts of event plurality or pluractionality (Lasersohn 1995). In doing so, I contribute to the joint effort of analyzing pluractionality not merely as an aktionsart-changing device in the realm of derivational morphology (Newman 1980, Lasersohn 1995, Wood 2007, Henderson 2017), but as a more general phenomenon (Van Geenhoven 2004; Laca 2004, 2006).

To this end, I have investigated the syntactic and semantic properties of two constructions (3 and 4) in the Spanish spoken between the Eo and the Navia rivers in Asturias (Spain), an area of longstanding contact between Spanish and Galician:

(3) *Tengo*   *estado*   *en*   *Roma*
      have-PRES.1P.SG be   in   Rome

(4) *Llevo*   *pedido*   *seis*   *libros*
      take-PRES.1P.SG   order-PRF.PTCP   six   books

The *tener* construction in (3) conveys the meaning that the speaker has been to Rome in more than one occasion, whereas the *llevar* construction in (4) conveys the meaning that the speaker has ordered six books, and crucially, that there has been more than one ordering event. In other words, a collective reading of (4) in which all the six books were ordered at once is not accepted. Moreover, sentence (4) does not necessarily convey a 1-to-1 distributive reading in which there has been 6 ordering events, one for each book, but rather, the books can be vaguely distributed across events (2 orderings of 3 books, 1 ordering of 4 and 1 of 2, etc.). The constructions in (3) and (4) differ in some respects (see below), but both of them necessarily denote a plurality of events. Leaving aside the structural details of each construction, for which I take a compromise position between Minimalism and Cartography in the form of a *Core Functional Hierarchy* (Ramchand & Svenonius, 2014), and focusing on the semantics that would give rise to the pluractional meanings that we observe empirically, I propose that in these constructions there is a pluractional head PLUR that combines with a predicate P over events and has the following semantic denotation, based on Lasersohn (1995):

$$[[PLUR]] = \lambda P \, \lambda X \, [\forall e, e' \in X] \, [P(e) \, \& \, P(e') \, \& \neg \, \tau(e) \, ^\circ \, \tau(e') \, \& \, \exists t \, [between$$
$$(t, \tau(e), \tau(e')) \, \& \neg \, \exists e'' \, [P(e'') \, \& \, t = \tau(e'')]] \, \& \, card(X) \geq 2]$$

The pluractional head PLUR combines with a predicate P over events to build a predicate over sets of events. The cardinality restriction *card* on the set X means that X must contain at least 2 events of the type denoted by P. These events have non-overlapping running times (τ), and there is a time t at which an event of the appropriate type does not occur, between the running times of any two events e and e' in the set satisfying the pluractional head.

The *llevar* construction is a bit especial in that it seems to require the presence of a quantified object somewhere within the verb phrase, either a direct one like in (4) or an object within a selected prepositional phrase (e.g. *llevan participado en varias competiciones* 'they have participated in several competitions'). *Llevar* also accepts singular objects as long as they are part of a presupposed set: imagine a context where the doctor has prescribed a number of pills to his patient, named Susana, and after a few days he is asking her how effective they are. She replies (5), meaning 'Up until now I have only taken one (of the total number that were prescribed)'.

(5) *Hasta ahora   sólo   llevo   tomado   una*
    until   now   only   llevar-PRS.1P.SG   take-PRF.PTCP   one

To account for the particular empirical picture shown by *llevar*, I assume the presence of a lexical presupposition: the idea is that, when used as an auxiliary, *llevar* introduces a certain condition that needs to be fulfilled so that the clause it appears in can have a truth value. The condition can be stated in the following terms:

For any predicate P over events selected by *llevar*, and set of events X of the P type:

    (i)   there exists some set A in the domain of individuals, which is the set of all the atomic individuals that participate in a particular selected relation R for each P event in the set X, and

(ii) $\forall e, e' \in X, \forall x, x' \in P(A) \ [e \neq e' \ \& \ R(e,x) \ \& \ R(e',x') \rightarrow x \neq x']$

The condition in (ii) ensures that for each R, the individual(s) involved will be distinct. $P(A)$ is the power set of A and it is there to guarantee that a one-to-one match is not required between atomic individuals and separate events, but that some events can have plural participants (predicting the vague distributivity illustrated in (4)).

The relevance of presupposed sets is manifested through different tests, and I give one of them here for illustration. Consider the contrast between (a) and (b) below:

(6) *Tengo un examen mañana, pero…*   'I have an exam tomorrow, but…'

a. */? *Sólo llevo*   *leído*   *un libro*
        only llevar-PRES.1P.SG   read-PRF.PTCP   one book
        'I have only read one book'

b. */? *Sólo llevo*   *leído*   *un capítulo*
        only llevar-PRES.1P.SG   read-PRF.PTCP   one chapter
        'I have only read one chapter'

If the condition on *llevar* was purely structural, we would not expect any contrast in acceptability between 'book' and 'chapter'. If, on the other hand, we regard (6a-b) as a difference in terms of presupposed sets, the contrast above follows straightforwardly from the fact that a chapter is much more likely to be taken as part of a set than a book.

Summing up, on the empirical side this talk presents new data that helps us understanding the (micro)variation that exists in these pluractional constructions across the Romance landscape, and on the theoretical side it puts forward a proposal that gives these constructions a place among event-based accounts of pluractionals more generally.

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