

**Temporal location of events and
the distribution of the Romance counterparts of *since*-adverbials**

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This paper focuses on distinguished cases of temporal location of events (accomplishments and achievements) by way of adverbials. Data is mainly from Portuguese, although information from other Romance languages (Spanish, French, and Italian) is also provided; English is used as the reference language for comparative analysis. The formal framework for analysis is the Discourse Representation Theory, as presented in Kamp & Reyle (1993).

The point of departure for discussion is the distribution of Portuguese *desde*-adverbials (and their Romance counterparts), which seems to be much more restricted than that of their English counterparts (*since*-adverbials), as illustrated in the following examples:

- (1) a. *O Paulo casou desde 1980.
*Paulo s'est marié depuis 1980.
Paulo has got married since 1980.
- b. O Paulo casou três vezes desde 1980.
Paulo s'est marié trois fois depuis 1980.
Paulo has got married three times since 1980.
- (2) a. *Este alpinista morreu desde 1980.
*Cet alpiniste est mort depuis 1980.
(?)This climber has died since 1980.
- b. Três alpinistas morreram aqui desde 1980.
Trois alpinistes sont morts ici depuis 1980.
Three climbers have died here since 1980.
- (3) a. *O Paulo escreveu este livro desde 1980.
*Paulo a écrit ce livre depuis 1980.
Paulo has read this book since 1980.
- b. O Paulo escreveu três livros desde 1980.
Paulo a écrit trois livres depuis 1980.
Paulo has written three books since 1980.

I advocate that two substantially different modes of temporal location – whose compatibility with time adverbials may vary – are involved in the examples *a* and *b*. Examples *a* illustrate what can be termed a **simple inclusive location**, expressed by a condition [$e \subseteq t$] (where *e* is the described event, and *t* is the location time, defined by the temporal adverbial). This mode of temporal location – where the basic function of the time adverbial is to provide a frame for locating an event (by stating that it falls anywhere within this frame) – is usually assumed in the literature to be the one associated with event-descriptions (cf. e.g. Kamp & Reyle 1993: 513). Examples *b* illustrate a more complex and interesting case, on which I concentrate in this paper. The event described in these sentences may be conceived of as a complex event composed of three sub-events of Paulo getting married, of a climber dying (in the mentioned place), or of Paulo writing a book, respectively. Formally, it can be represented by a non-atomic discourse referent *E*, obtained by summation of the relevant sub-events (an analysis that requires the assumption of a Boolean

structure for events). Now, the role of the time adverbials in these sentences appears not to be the same as in the examples *a*. In the *b* cases, their role is to provide a temporal frame for the above-mentioned summation operation, assuring that the non-atomic event is the supremum of the set of relevant sub-events that occur within this frame (the quantifier *three times*, for instance, directly stating the cardinality of such set). Metaphorically speaking, the (location) time associated with these adverbials has to be “fully scanned” in order to gather all the relevant sub-events happening within it. In DRT-terms, this **full-scanning inclusive location** can be expressed by the conditions $[E \subseteq t]$ and $[E = \Sigma e' \mathbf{K}]$, where \mathbf{K} is a sub-DRS containing the condition $[e' \subseteq t]$ (e' being the relevant sub-event, and t the location time, defined by the temporal adverbial).

By observing the distribution of the Romance counterparts of *since*-adverbials, I try to identify the various contexts where the summation operation at stake (which is assumed to legitimate the use of these adverbials) takes place. These include – besides contexts with quantifiers over events, as (1b), or quantifiers over objects, as (2b) and (3b) – those with quantifiers over parts of objects, temporal measure adverbials, quantifiers over scalar properties, co-ordinating conjunctions, and exclusion operators, as in the following examples, respectively:

- (4) O Paulo leu dois terços deste livro desde segunda-feira.
Paulo a lu deux tiers de ce livre depuis Lundi.
Paulo has read two thirds of this book since Monday.
- (5) O Paulo trabalhou na tese (durante) mais de cinquenta horas desde segunda-feira.
Paulo a travaillé à sa thèse (pendant) plus de cinquante heures depuis Lundi.
Paulo has worked on his thesis for more than fifty hours since Monday.
- (6) O Paulo engordou 5 kg desde o ano passado.
Paulo a grossi 5 kg depuis l'année dernière.
Paulo has put on 5 kg since last year.
- (7) O Paulo visitou Madrid, Paris e Genebra desde o ano passado.
Paulo a visité Madrid, Paris et Genève depuis l'année dernière.
Paulo has visited Madrid, Paris and Geneva since last year.
- (8) O Paulo só escreveu este livro desde 1995.
Paulo a seulement écrit ce livre depuis 1995.
Paulo has only written this book since 1995.

Summarising, in this paper I will compute the semantics of a given subclass of temporal locating operators by resorting to a Boolean summation operation over events and by identifying the triggers that allow the application of such operation. It will be shown that all such triggers share the property of, directly or not, supplying to the semantic interpreter a restricted domain of events based on which a verification of occurrences of this sort of entities in a given interval of time can operate. This semantics is required for the interpretation of the Romance temporal expressions with Portuguese *desde* or its counterparts, as opposed to English *since*-phrases.

REFERENCES

- Kamp, Hans e Uwe Reyle: 1993, *From Discourse to Logic. Introduction to Modeltheoretic Semantics of Natural Language, Formal Logic and Discourse Representation Theory*, Kluwer, Dordrecht.