A prominence-based account of temporal discourse structure

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Abstract

In this article, we develop an account of temporal discourse structure that is composed of three different levels and based on the notion of prominence. The levels of temporal structuring in discourse are as follows:

(i) the level of the linear and hierarchical temporal structure, which is constituted by time points and time spans as well as their interrelations,
(ii) the level of perspective and perspective taking, and
(iii) the level of foregrounding and backgrounding and text segmentation into story lines.

Although these levels have already been identified by the research literature, they have neither been explicated in a systematic way while taking prominence into consideration nor brought together in a complete descriptive account. The unifying ingredient of our account is the principle of prominence, according to which the elements of a set of equals compete as to their prominence status, with one of them standing out with respect to the others at a certain point of the unfolding discourse. We show the crucial role of prominence in the structuring of discourse on each of the three levels.

Our prominence-based account highlights the hierarchical structuring of discourse. This allows us to consider all important features of temporal discourse structure in one integrated account: tense choice, aspect, adverbial expressions and connectors, discourse relations and episode structure.

1. Introduction

The temporal make-up of discourse concerns different "informative levels". First, eventualities are basically ordered as to what happens after what, and what holds while something else happens and suchlike (linear ordering). Second, eventualities are ordered relative to their contribution to a main story line or their belonging to the background. Third, within a text, perspective may be shifted so that eventualities may be viewed from different time points. Although these levels have been considered individually in the research literature, they have not been integrated under the unitary principle of

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prominence. Importantly, all these levels are necessary for an explanation of tense choice and the role of tense in discourse structuring, especially when it comes to narrative texts. This unifying perspective is also designed to overcome some of the problems existing theoretical approaches encounter with less-than-typical uses of tenses. Still, as is well known, tense choice is only one tool contributing to the complexity of the temporal structure in natural discourse.[1] Additionally, not only grammatical and lexical aspect, but also further lexical items such as adverbs and conjunctions, and also rhetorical relations play an important role. We bring all this together and take prominence as the unifying factor for the different levels of discourse quoted above. Our contribution thus aims to put together the ingredients of this perspective to describe the temporal structure of discourse with a focus on narratives. In a first step, we intend to account for the temporal structure in Romance languages but we envisage to extend our approach in order to cover further languages. One of the future desiderata will be to flesh it out converting it into a rule-based model that will be falsifiable and may be used to make correct predictions for different sorts of language data.[2]

The basic formal system of our approach is in the tradition of Reichenbach ([1947] 1956), and takes up further DRT-based developments elaborated by Kamp and Rohrer (1983) and Kamp and Reyle (1993), and refined in further publications especially by Kamp and colleagues (e.g., Kamp et al., 2011). In order to account for discourse relations and their role in the hierarchical structuring of discourse as well as its temporal interpretation, we also integrate notions developed by Asher and Lascarides (1993, 2003), who extended the original DRT approach to a Segmented Discourse Representation Theory (SDRT).

We additionally introduce prominence. It is a central property of discourse structuring that has hardly been mentioned in discourse analyses so far. We define it in terms of Himmelmann and Primus (2015) and also flesh it out by applying it to the temporal discourse structure. For example, to operationalize prominence better, we implement a domain restriction. Our refined definition of the domain adopts the right frontier constraint (cf., e.g., Asher and Lascarides, 2003) (see Section 4.1).

As we will show, the descriptive potential of the aforementioned theoretical accounts is restricted to rather typical cases of tense choice. We will present some interesting French examples that are particularly problematic for standard tense theories. By introducing prominence as an additional feature attached to time points, these difficulties can be adequately dealt with.

2. Temporal modeling: from Reichenbach to DRT

The temporal structure of discourse is dynamic. At the heart of temporal modeling thus lies the issue of how to model an update, and how to differentiate it from its stative counterpart. We have to ask ourselves what the basic building blocks of the temporal structure of discourse are, which ones may be updated, and furthermore, how the update works. Undoubtedly, if a story advances in time, it seems straightforward to talk about events or actions occurring one after the other. As we will see, however, this basic intuition is too simple for a refined description. What is more, in the early days of temporal modeling, an important focus was placed on tenses, and not so much on the temporal interrelations between eventualities. This is too restrictive for an overall description of temporal discourse structure.

In what follows, we will have a close look at three important steps which the description of temporal structure took. It seems to us that the reference point is an adequate basis to model temporal updating in texts. Therefore, it will receive special attention. We start with a brief summary of Reichenbach's ([1947] 1956) tense model where the reference point is first mentioned. We will then continue with more recent treatments of the concept of reference point and how it is implemented in the literature. With this in mind, we will add the further ingredients of the basic temporal model. We will close the section with some remarks on the limitations which a prominence-based temporal account is able to overcome.

2.1. The model of Reichenbach (1947)

The influential tense model by Reichenbach ([1947] 1956) describes time reference of tense forms as a relation between three time points or time spans (cf. Reichenbach, 1956:287 ff.). The basis of temporal reference is the utterance time ("point of speech" in Reichenbach's terms and abbreviated as S). The utterance time is intrinsically linked to the primary origo, that is the speaker and his/her *hic* and *nunc*, i.e., his/her local and temporal coordinates (cf. Bühler [1934] 1982). The so-called "point of the event" (E) is the time at which the eventuality[3] occurs or holds and is, at least in the case of simple tenses, described as being situated relative to the speech time, i.e., before, simultaneously, or after (cf.

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[1] For the time being, we will mostly focus on problems especially relevant in written narrative discourse.

[2] For reasons of simplicity we use the term account to refer to the approach presented here. It should not be misinterpreted as already fully developed in terms of formalization.

[3] The term "eventuality" is intended to be a generic term for events and states and other types of situation (cf. also Kamp et al., 2011:199, footnote 19). As Kamp et al. (2011:199, footnote 19) state, the term goes back to Bach (1981).