Localising objects and events:
Discoursal applicability conditions for spatiotemporal expressions in English and German

Thora Tenbrink, University of Bremen
SFB/TR 8 Spatial Cognition

Abstract

The present thesis takes the stance of cognitively motivated discourse analysis. Phenomena of naturally produced language are approached from the perspective of cognitive science, which serves as the background for accounting for principles and preferences in the application of spatiotemporal expressions in context. In this way, the approaches of two major research areas can be combined in a unique way, yielding new and promising ways of accounting for spontaneous language usage with respect to two fundamental domains of existence: space and time. This is accomplished by supplementing methods and insights from linguistics, which constitutes the starting point of research in the present work, with findings from other disciplines within the area of cognitive science, ranging from psychology and philosophy to geography, computer science, and artificial intelligence.

The approach taken in the present thesis starts out from general issues pertaining to spatial and temporal cognition, along with a broad view on recent insights and approaches relevant to the area of discourse analysis within linguistics. It then narrows down to a focus on English and German linguistic expressions used to represent the dimensions of space and time: the spatial dimensional terms (*in*) *front / vor(ne), behind / back / hinter, left / links,* and *right / rechts,* and their temporal counterparts *before / bevor,* and *after / nachdem,* including their various syntactic variants. The thesis addresses the popular hypothesis that temporal terms are closely related to, and conceptually (as well as historically) based on, spatial terms (e.g., Haspelmath 1997). While this hypothesis relies mainly on research findings concerning the morphosyntax and semantics of these terms (often in various languages), the present analysis specifically draws on research in the recently blooming area of discourse analysis, applied and accounted for in the light of insights from cognitive science. This allows for a cognitively motivated focus on the semantics-pragmatics interface that is new and unique to the discussion of spatial and temporal terms and their apparent interdependency, based on a fine-grained analysis of their actual usage in natural discourse. It deals with ways in which spatial terms differ systematically from temporal ones with regard to their particular discoursal applicability conditions, and with regard to the implications involved in their employment in discourse. Thus, a central aim of the present study is the investigation of whether evidence for the assumed conceptual dependency can be identified with respect to application. The specific complications involved in the

separation of semantic and pragmatic levels in the analysis of dimensional terms are addressed and discussed in the course of the present work.

Spatial linguistic expressions depend to a high degree on the immediate spatial surroundings, or a mental model thereof. The applicability conditions of specific expressions are determined by the spatial scenario, the discourse functions, as well as the relationships between the objects involved. Here, central discourse tasks concern the identification or localisation of objects, the specification of spatial relationships between objects, and the usage of spatial information for navigation tasks.

Temporal linguistic expressions, in contrast, are used in order to highlight relationships between events in a discourse. For example, for the temporal connectors *before* und *after* it has been noted that the temporal juxtaposition of events often involves a conceptualisation of the events as causally related. Prior knowledge and common sense both play a role in interpreting a seemingly neutral representation appropriately. This kind of pragmatic inference has an impact on the applicability conditions, which differ fundamentally from the discourse features of spatial expressions.

The results of literature-based discussions as well as empirical investigations together lead to the identification of basic underlying principles of applicability of the two kinds of linguistic expressions, which are related to the conceptualisation of the two domains of space and time. A conceptual dependency relation between the applicability conditions of spatial and temporal expressions is not identified, in contrast to previous findings relating to the morphosyntax and semantics of the terms. Instead, some interesting similarities and parallels, but also fundamental differences in application are identified and discussed, which may pertain to domain-specific conceptions as well as to general principles of linguistic communication operating in discourse.