Grammars of Space

Spatial language – that is, the way in which languages express space and time – is an important area of current research, offering new insights into one of the most central areas of human cognition. In this pioneering study, a team of leading linguists and psychologists review the spatial domain across a wide variety of languages. Contrary to existing assumptions, they show that there is great variation in the way space is conceptually structured across languages, thus substantiating the controversial question of how far the foundations of human cognition are innate.

Grammars of space is a supplement to the psychological information provided in its companion volume, *Space in language and cognition* (also available from Cambridge University Press). It represents a new kind of work in linguistics, 'semantic typology', which asks what are the semantic parameters, or semantic notions, used to structure particular semantic fields. The authors exemplify new methods, involving controlled data collection across a dozen languages without reliance on a common intermediary language. Comprehensive and informative, this book will be essential reading for all those interested in comparative linguistics, spatial cognition and the interface between them.

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Language, culture and cognition

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This series looks at the role of language in human cognition – language in both its universal, psychological aspects and its variable, cultural aspects. Studies will focus on the relation between semantic and conceptual categories and processes, especially as these are illuminated by cross-linguistic and cross-cultural studies, the study of language acquisition and conceptual development, and the study of the relation of speech production and comprehension to other kinds of behaviour in social context. Books come principally, though not exclusively, from research associated with the Max Planck Institute for Psycholinguistics in Nijmegen, and in particular the Language and Cognition Group.

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Explorations in Cognitive Diversity

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Preface

This book is about the way languages structure the spatial domain. Spatial language is an important topic of current research, because it offers insights into a central area of human cognition. The research in this book shows that, contrary to the prevailing assumptions, there is quite unexpected variation in the conceptual structure of this central domain across languages. Semantic universals do not lie at the complex conceptual level that many linguists and psychologists had supposed, but rather at a more abstract level.

This book is designed as the companion volume to *Space in language and cognition* (Cambridge University Press, 2003), which is focussed on the psychology of space, and the cognitive consequences of language difference. In contrast, the present volume provides the methods, empirical materials and the wide survey of language variation which are presupposed and form the basis for the study of cognition in the companion book.

This book represents a new kind of work in linguistics, which we are calling 'semantic typology'. Most work in typology takes some function, and asks how different languages use different formal means to satisfy this function. Instead, in this book, starting out from a functional base (centrally, how one answers 'Where'-questions), we ask what are the *semantic* parameters, or semantical notions, used to structure the relevant semantic field. Such semantic parameters are reflected in both major grammatical distinctions and the structure of lexical fields. Semantic typology of this kind requires a new way of working, involving much more carefully controlled methods for data collection.

An introduction to the book sketches the background to this work, explaining how the spatial domain comprises a number of coherent sub-domains, especially relevant for this book being the sub-domains of topology, frames of reference and motion description. The introduction also establishes a common terminology for the volume. It further provides details about the methods employed uniformly across a sample of languages, allowing controlled cross-linguistic comparison.

The body of the book collects together in one volume closely comparable descriptions of spatial language in a dozen languages, nearly all from unrelated stocks in Australia, New Guinea, Mexico, the Amazon, West Africa, Japan

and Europe (for details see below). These studies were conducted by staff of the same research unit, each having long-standing expertise in the relevant language, and they are based on repeated field trips specifically aimed at the questions here addressed. The collection of papers allows one to see, more or less at a glance, how differently languages may treat a single important semantic domain. Information of this kind has never before been made available – instead comparisons have focussed on particular parts of speech (like spatial adpositions), or have focussed on the particular resources of an individual European language. Information on spatial description can of course be found in grammars, but it is distributed and always incomplete, and one cannot reliably compare one such description with another. In contrast in this book, in order to achieve close comparison, the papers each touch upon a series of key topics, and the researchers have all used a shared set of eliticitation techniques. Each paper represents a summary of in-depth research, which has been subject to extensive mutual discussion.

The most important chapter is the last, which surveys what has been collectively discovered. It is shown how these individual language descriptions, because they have a common referential base, can be used to build a cross-linguistic typology of the spatial domain. Three major domains are reviewed in depth: topology, frames of reference and motion description. It becomes obvious that many suggested universals of spatial language evaporate, and many important parameters of spatial language have been entirely neglected. There are, for example, no universal IN and ON concepts, and in many languages the important locative information is coded in verbs, not adpositions, as so often assumed. Similarly, the semantics of 'motion verbs' like ENTER or EXIT is underlyingly quite different across languages, in some languages coding motion, in others change of location, in others only change of locative relation between figure and ground. Nevertheless, there are some remarkable constancies in the more abstract semantic parameters that are relevant to spatial morphemes and constructions, and thus the overall picture that emerges is one of unexpected variation across languages in the semantic packages constituting the meanings of morphemes, coupled with constraints on the boundaries of the domain and probable universals in underlying semantic parameters.

The volume as a whole thus contributes to the linguistic sciences on a number of dimensions. First, it is an important contribution to the study of spatial language, a topic of much current interest and central to the study of human cognition. Second, it introduces a new subfield of linguistics, semantic typology, which is deeply relevant to many current debates about nativism in human cognition – it is a crucial field, for example, for the study of child language, for it shows that children cannot be presumed to know in advance what kinds of meanings map onto words. Third, it introduces new methods of quite general application for cross-linguistic comparison. Fourth, it contributes much

substantial detail about individual languages – many of the chapters would make excellent assigned reading as a source of insights into language difference. Fifth, the book as a whole outlines a whole set of plausible universal constraints and parameters in this area, while debunking many simpler ideas.

But the book will also be of interest outside linguistics, to all those in philosophy and psychology interested in the status of 'innate ideas'. For the first time, it is possible to inspect in a restricted but important domain, using controlled comparison, just how shared or divergent are the concepts that languages presuppose.