
Preface

A wide variety of evidence suggests that language is probabilistic. In language comprehension and production, probabilities play a role in access, disambiguation, and generation. In learning, probability plays a role in segmentation and generalization. In phonology and morphology, probabilities play a role in acceptability judgments and alternations. And in syntax and semantics, probabilities play a role in the gradience of categories, syntactic well-formedness judgments, and interpretation. Moreover, probabilities play a key role in modeling language change and language variation.

This volume systematically investigates the probabilistic nature of language for a range of subfields of linguistics (phonology, morphology, syntax, semantics, psycholinguistics, historical linguistics, and sociolinguistics), each covered by a specialist. The probabilistic approach to the study of language may seem opposed to the categorical approach, which has dominated linguistics for over 40 years. Yet one thesis of this book is that the two apparently opposing views may in fact go very well together: while categorical approaches focus on the endpoints of distributions of linguistic phenomena, probabilistic approaches focus on the gradient middle ground.

This book originated as the symposium “Probability Theory in Linguistics,” held in Washington, D.C., as part of the Linguistic Society of America meeting in January 2001. One outcome of the symposium was the observation that probability theory allows researchers to change the level of magnification when exploring theoretical and practical problems in linguistics. Another was the sense that a handbook on probabilistic linguistics, providing necessary background knowledge and covering the various subfields of language, was badly needed. We hope this book will fill that need.

We expect the book to be of interest to all students and researchers of language, whether theoretical linguists, psycholinguists, historical linguists, sociolinguists, or computational linguists. Because probability theory has not formed part of the traditional linguistics curriculum, we have included a tutorial on elementary probability theory and probabilistic grammars, which provides the background knowledge for understanding the rest of the book. In addition, a glossary of probabilistic terms is given at the end of the book.

We are most grateful to the authors, who have given maximal effort to write the overview chapters on probabilistic approaches to the various subfields of linguistics. We also thank the authors for their contribution to the review process. We are grateful to Michael Brent for his contribution to the original symposium and to Anne Mark for her excellent editorial work. Finally, we would like to thank the editor, Thomas Stone, for his encouragement and help during the processing of this book.

The editors of this book worked on three different continents (with the South Pole equidistant from us all). We recommend this as a fabulously efficient way to work. The book never slept.