Victoria A. Fromkin, Editor

and

Susan Curtiss

Bruce P. Hayes

Nina Hyams

Patricia A. Keating

Hilda Koopman

Pamela Munro

Dominique Sportiche

Edward P. Stabler

Donca Steriade

Tim Stowell

Anna Szabolcsi

Linguistics

An Introduction to Linguistic Theory



Contents

Preface Notes on Authors		vi viii
Pai	rt I Introduction	1
1	Linguistics: The Scientific Study of Human Language	3
Part II Morphology and Syntax		23
2	Morphology: The Structure of Words	25
3	Syntax I: Argument Structure and Phrase Structure	89
4	Syntax II: Syntactic Dependencies	195
5	Syntax III: The Distribution of Verbal Forms: A Case Study	257
6	Acquisition of Word and Sentence Structure	324
Pai	rt III Semantics	369
7	Semantics I: Compositionality	371
8	Semantics II: Scope	399
9	Semantics III: Cross-Categorial Parallelisms	421
10	Acquisition of Meaning	449
Pai	rt IV Phonetics and Phonology	475
11	Phonetics: The Sounds of Language	477
12	Phonology I: Basic Principles and Methods	518
13	Phonology II: Phonological Representations	579
14	Phonology III: Explanation and Constraints in Phonology	609
15	Acquisition of Phonetics and Phonology	658
Glo	ossary	682
Bibliography		721
Index		729

Preface

This textbook is intended for introductory courses in linguistic theory for undergraduate linguistics majors or first-year graduate students. Its aim is to provide the students who have no previous knowledge of linguistics with the background necessary to continue with courses in the core areas of the field - phonetics, phonology, syntax, morphology, semantics. In each part the book is concerned with discussing the underlying principles of Universal Grammar common to all languages, showing how these are revealed in language acquisition and in the specific grammars of the world's languages. Theoretical concepts are introduced through the analysis of a wide set of linguistic data from Arabic to Zulu. By working through real linguistic data, students will learn how to do linguistics. The interplay between theory and data is highlighted in all the chapters. In addition to the basic components of the grammar, the book includes discussion on child language acquisition of the core components of the mental grammar. This reflects the recognition that an understanding of the child's ability to acquire language is central to the theory of Universal Grammar.

The text is divided into four parts. Part I introduces the student to the science of linguistics and presents a bird's-eye view of the history of the field and how we got to where we are today. Part II covers morphology (chapter 2) and syntax (chapters 3–5) and the acquisition of morphology and syntax (chapter 6). Part III covers semantics and the acquisition of meaning (chapters 7–10), Part IV includes phonetics (chapter 11) and phonology (chapters 12–14) and the acquisition of the sounds and sound patterns of language (chapter 15).

Extensive problems are presented as exercises in each core chapter. As students work through these exercises while reading the text, the basic concepts and the empirical basis for the principles proposed are revealed. Additional exercises follow each of the core chapters in each part. References for further reading follow each chapter, and an extensive glossary and a general bibliography are also included.

The textbook can be used for either a quarter or a semester course. In a shorter course, of say, 10 weeks, the instructor may decide not to assign chapters 5, 9, and 14, chapters that contain enriched and ground-breaking material which may be postponed for more advanced study. The chapters on acquisition can be used independently in courses on language acquisition, as can other sections, as readings for graduate-level courses in the specific sub-areas.

This textbook is a collective effort by the authors, all of whom were faculty members in the UCLA Department of Linguistics at the time of writing, a department that has a reputation for both excellent teaching and research. All of us teach both undergraduate and graduate courses including the course for which this textbook was written.

We would like to express our deep appreciation to all the students who have read through our handouts and worked through our problems and who should in many ways be considered co-authors of this textbook. We are grateful to Philip Carpenter and Steve Smith of Blackwell Publishers for the confidence they showed in the UCLA *gang of twelve*.

Finally, we acknowledge the huge debt that we believe linguistics owes to Noam Chomsky. His pioneering research in transformational generative grammar, in both syntax and phonology, and his vision of linguistics as a central player in the new field of cognitive science, ushered in what has come to be called the Cognitive Revolution. The questions that he raised regarding the nature of language, the structure of the mental grammar, and the problem of explaining how this system of knowledge is acquired by children remain the central focus of our field and of this book.

Notes on Authors

Victoria A. Fromkin, editor and contributor to this textbook, is a professor of linguistics at the University of California, Los Angeles (UCLA), where she also served as department chair, and Graduate Dean and Vice Chancellor of Graduate Programs. She is the recipient of the UCLA Distinguished Teaching Award and is a past president of the Linguistic Society of America, a member of the National Academy of Sciences, and a Fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, the Acoustical Society of America, the American Psychological Society, and the New York Academy of Science. She is the author (with Robert Rodman) of *An Introduction to Language* (6th edition) and over 100 monographs and papers. Her primary research lies in the interface between the mental grammar and linguistic processing, and issues related to brain, mind, and language.

Susan Curtiss received her Ph.D. at UCLA, where she is now a professor. She is best known for her work on the critical period for language acquisition and modularity. Her book *Genie: A Psycholinguistic Study of a Modern-Day "Wild Child"* has become a classic in the field. She has also published widely on dissociations of language and cognition in development and breakdown and on language acquisition in atypical circumstances. She has authored numerous language tests, including the internationally used *CYCLE*, co-authored with Jeni Yamada.

Bruce P. Hayes received his Ph.D. from MIT in 1980 and is now a professor of linguistics at UCLA, with a primary interest in phonology. His publications in this area include *Metrical Stress Theory: Principles and Case Studies* (University of Chicago Press, 1995), and various papers on stress, the phonetics/phonology interface, metrics, and segment structure.

- Nina Hyams is a professor of linguistics at UCLA. She is author of the book Language Acquisition and the Theory of Parameters (D. Reidel, 1986) and has published numerous papers on grammatical development in children acquiring English and other languages. She has been a visiting scholar at the University of Utrecht and the University of Leiden in the Netherlands, and has given numerous lectures throughout Europe and Japan.
- **Patricia A. Keating** is professor of linguistics and director of the Phonetics Laboratory at UCLA. She completed her Ph.D. in 1979 at Brown University, and then held an NIH postdoctoral fellowship in the Speech Communications Group at MIT before coming to UCLA in 1981. In 1986 she won a UCLA Distinguished Teaching Award. Her main areas of research and publication are experimental and theoretical phonetics, and the phonology-phonetics interface. She is the author of "The Phonology-Phonetics Interface" in the 1988 Linguistics: The Cambridge Survey, and the contributor of the lead article on "Phonetics" to the MIT Encyclopedia of the Cognitive Sciences, as well as numerous articles in linguistics and phonetics journals.
- Hilda Koopman was born in Nijmegen, the Netherlands, and studied General Linguistics at the University of Amsterdam. She received her Ph.D. from the University of Tilburg in 1984 and held a research position at the University of Québec for several years before joining the faculty at UCLA in 1985, where she currently is professor of linguistics. She is the author of numerous articles on syntactic theory, many of which are based on original fieldwork on African languages. Her books include The Syntax of Verbs: From Kru Languages to Universal Grammar (Foris Publications, 1984), The Syntax of Specifiers and Heads (Routledge, 1999), and Verbal Complexes (with Anna Szabolcsi; MIT Press, forthcoming).
- Pamela Munro, a professor of linguistics at UCLA, received her Ph.D. from the University of California, San Diego. She has conducted fieldwork on over twenty indigenous languages of the Americas and is an author of ninety books and articles, descriptive and theoretical studies of the morphology, phonology, syntax, and historical development of languages of the Uto-Aztecan, Yuman, and Muskogean families of American Indian languages. Among her publications are dictionaries or grammars of Cahuilla, Chickasaw, Kawaiisu, and Mojave, as well as dictionaries of the Wolof language of Senegal and Gambia and of UCLA undergraduate slang.
- Dominique Sportiche, after studying mathematics and physics in Paris, France, studied linguistics at the Massachusetts Institute of Technology,

where he received a Ph.D. in 1984, supervised by Noam Chomsky. He was at the University of Québec in Montreal, Canada, before coming to UCLA where he is now a professor of linguistics and romance linguistics. His research and publications focus primarily on syntactic analysis and syntactic theory of natural languages. His most recent book is Partitions and Atoms of Clause Structure (London: Routledge, 1998).

Edward P. Stabler studied philosophy and linguistics at MIT, receiving a Ph.D. in philosophy in 1981. After holding several industrial and academic positions, he moved to the University of California, Los Angeles, in 1989, where he is currently a professor of linguistics. He is an active member of the European Association for Logic, Language and Information (FoLLI) and the Association for Computational Linguistics (ACL). He is the author of *The Logical Approach to Syntax* (MIT Press, 1992) and other books and papers on formal and computational models of syntax and semantics.

Donca Steriade was born in Bucharest, Romania, and trained as a classicist before becoming a linguist. She obtained her Ph.D. in 1982 from MIT and taught at the University of California, Berkeley, and at MIT before joining the Department of Linguistics at UCLA where she is now a professor of linguistics. Her research focuses particularly on phonology, the phonology/phonetics interface, and optimality theory. She is the author of numerous studies of segmental, syllabic and metrical structure.

Tim Stowell received his Ph.D. in linguistics from MIT in 1981. He is now a professor of linguistics at UCLA, having served as Chair of that department from 1994 to 1998; he has also held visiting positions at the University of Massachusetts (Amherst) and the University of Vienna, and has been a fellow of the Netherlands Institute for Advanced Study. His research has been primarily in syntactic theory; his early work on the theory of phrase structure played an influential role in arguing against the existence of phrase structure rules, and in favor of deriving properties of phrase structures from general principles. His recent research has focused on the interface between syntax and semantics, investigating the phrase structure and interpretation of tense and quantifier scope.

Anna Szabolcsi was born in Budapest and received her Ph.D. from the Hungarian Academy of Sciences. She held a research position in the Institute of Linguistics in Budapest before coming to UCLA as a professor of linguistics, and is currently a professor of linguistics at

New York University. Her research interests include formal semantics, the syntax/semantics interface, Hungarian syntax, and categorial grammar. Her recent books are Ways of Scope Taking (editor and contributor, Kluwer, 1997) and Verbal Complexes (with Hilda Koopman; forthcoming, with MIT Press).