

Syntax

A Generative Introduction

Fourth Edition



Andrew Carnie

WILEY Blackwell

Introducing Linguistics

This outstanding series is an indispensable resource for students and teachers – a concise and engaging introduction to the central subjects of contemporary linguistics. Presupposing no prior knowledge on the part of the reader, each volume sets out the fundamental skills and knowledge of the field, and so provides the ideal educational platform for further study in linguistics.

- | | |
|----------------------------------|---|
| 1. Andrew Spencer | <i>Phonology</i> |
| 2. John Saeed | <i>Semantics</i> , 4th Edition |
| 3. Barbara Johnstone | <i>Discourse Analysis</i> , 3rd Edition |
| 4. Andrew Carnie | <i>Syntax</i> , 4th Edition |
| 5. Anne Baker and Kees Hengevelt | <i>Linguistics</i> |
| 6. Li Wei | <i>Applied Linguistics</i> |

Syntax

A Generative Introduction

Fourth Edition

Andrew Carnie

WILEY Blackwell®

This fourth edition first published 2021

© 2021 Andrew Carnie

Edition History: Blackwell Publishing, Ltd (1e, 2002 and 2e, 2007); John Wiley and Sons (3e, 2013 and 4e, 2021)

Wiley-Blackwell is an imprint of John Wiley & Sons, formed by the merger of Wiley's global Scientific, Technical and Medical business with Blackwell Publishing.

Registered Office

John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

Editorial Offices

350 Main Street, Malden, MA 02148-5020, USA 9600 Garsington Road, Oxford, OX4 2DQ, UK

The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK

For details of our global editorial offices, for customer services, and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell.

The right of Andrew Carnie to be identified as the author of this work has been asserted in accordance with the UK Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by the UK Copyright, Designs and Patents Act 1988, without the prior permission of the publisher.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Designations used by companies to distinguish their products are often claimed as trademarks. All brand names and product names used in this book are trade names, service marks, trademarks or registered trademarks of their respective owners. The publisher is not associated with any product or vendor mentioned in this book. This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold on the understanding that the publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional should be sought.

Library of Congress Cataloging-in-Publication Data

Names: Carnie, Andrew, 1969- author.

Title: Syntax : a generative introduction / Andrew Carnie.

Description: Fourth edition. | Chichester, West Sussex, UK Wiley-Blackwell, 2021. | Series: Introducing linguistics | Includes bibliographical references and

index. |

Summary: "Almost every preface to every syntax textbook out there starts out by telling the reader how different this book is from every other syntax textbook. On one hand, this is often the truth: each author shows their own particular spin or emphasis. This is certainly true of this textbook. For example, you'll be hard-pressed to find another textbook on Principles and Parameters syntax that uses as many Irish examples as this one does.. On the other hand, let's face facts. The basic material to be covered in an introductory textbook doesn't really vary much. One linguist may prefer a little more on binding theory, and a little less on control, etc. In this text, I've attempted to provide a relatively balanced presentation of most of the major issues and I've tried to do this in a student-friendly way. I've occasionally abstracted away from some of the thornier controversies, when I felt they weren't crucial to a student understanding the basics. This may make the professional syntactician feel that I've cut corners or laid out too rosy a picture. I did this on purpose, however, to give students a chance to absorb the fundamentals before challenging the issues. This was a deliberate pedagogical choice. I'm well aware that sometimes I've glossed over controversies, but I think a student has to learn the basics of how the system works before they can seriously critique and evaluate the model. This is a textbook, not a scholarly tome, so its aim is to reach as many students as possible. The style is deliberately low-key and friendly. This doesn't mean I don't want the students to challenge the material I've presented here. Throughout the book, you'll find grey "textboxes" that contain issues for further discussion or interesting tidbits. Many of the problem sets also invite the student to challenge the black and white presentation I've given in the text. I encourage instructors to assign these, and students to do them, as they form an important part of the textbook.

Instructors may note that if a favorite topic is not dealt with in the body of the text, a problem set may very well treat the question."-- Provided by publisher.

Identifiers: LCCN 2020037443 (print) | LCCN 2020037444 (ebook) | ISBN 9781119569237 (paperback) | ISBN 9781119569183 (pdf) | ISBN 9781119569312 (epub)

Subjects: LCSH: Grammar, Comparative and general--Syntax. | Generative grammar. Classification: LCC P291 .C33 2021 (print) | LCC P291 (ebook) | DDC

A catalogue record for this book is available from the British Library.

Cover Design: Wiley

Cover Image: Wassily Kandinsky, *Almost Submerged*, 1930

Set in 10 point Palatino LT, Std, 10point Styx Text 2 and 10 point Helvetica LT Std by the author

Dedicated with love to my parents, Robert and Jean, and in
memory of my teacher and mentor, Ken Hale

This book is accompanied by a workbook: *The Syntax Workbook: A Companion to Carnie's Syntax*, 2nd Edition available for purchase from <http://www.wiley.com>. The workbook is optional and serves as a supplement for students who want additional practice in syntactic analysis.

Additional online material including bonus chapters can be found on the book's website:

<http://www.wiley.com/go/carnie>

Contents

[Cover](#)

[Introducing Linguistics](#)

[Title page](#)

[Copyright](#)

[Dedication](#)

[Preface and Acknowledgments](#)

[Part 1: Preliminaries](#)

[Chapter 1: Generative Grammar](#)

[0. Preliminaries](#)

[1. Syntax as Science – the Scientific Method](#)

[2. Syntax as a Cognitive Science](#)

[3. Models of Syntax](#)

[4. Competence vs. Performance](#)

[5. A Clarification on the Word “Language”](#)

[6. Where Do the Rules Come From?](#)

[7. Choosing among Theories about Syntax](#)

[8. The Scientific Method and the Structure of this Textbook](#)

[9. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

[Chapter 2: Parts of Speech](#)

[0. Words and Why They Matter to Syntax](#)

[1. Determining Part of Speech](#)

[2. The Major Parts of Speech: N, V, Adj, and Adv](#)

[3. Open vs. Closed; Lexical vs. Functional](#)

[4. Subcategories and Features](#)

[5. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

Chapter 3: Constituency, Trees, and Rules

[0. Introduction](#)

[1. Rules and Trees](#)

[2. How to Draw a Tree](#)

[3. Modification and Ambiguity](#)

[4. Constituency Tests](#)

[5. Constituency in Other Languages](#)

[6. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

Chapter 4: Structural Relations

[0. Introduction](#)

[1. The Parts of a Tree](#)

[2. Dominance](#)

[3. Precedence](#)

[4. C-command](#)

[5. Grammatical Relations](#)

[6. Conclusions](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

[Chapter 5: Binding Theory](#)

[0. Introduction](#)

[1. The Notions Coindex and Antecedent](#)

[2. Binding](#)

[3. Locality Conditions on the Binding of Anaphors](#)

[4. The Distribution of Pronouns](#)

[5. The Distribution of R-expressions](#)

[6. Why Does Binding Theory Matter to Syntacticians](#)

[7. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

[Part 2: The Base](#)

[Chapter 6: X-bar Theory](#)

[0. Introduction](#)

[1. Bar-level Projections](#)

[2. Generalizing the Rules: The X-bar Schema](#)

[3. Complements, Adjuncts, and Specifiers](#)

[4. Some Definitional Housekeeping](#)

[5. Parameters of Word Order](#)

[6. Drawing Trees in X-bar Notation](#)

[7. Conclusion](#)

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 7: Extending X-bar Theory to Functional Categories

0. Introduction

1. Determiner Phrases (DPs)

2. A Descriptive Tangent into Clause Types

3. Complementizer Phrases (CPs)

4. Tense, Perfect, Progressive and Voice Phrases

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 8: Constraining X-bar: Theta Theory

0. Introduction

1. Some Basic Terminology

2. Thematic Relations and Theta Roles

3. The Lexicon

4. Expletives and the Extended Projection Principle

5. Conclusion

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 9: Theta Grids and Functional Categories

0. Introduction

1. Complementizers

2. Determiners

3. Using Theta Grids for English Auxiliaries

4. Main verbs vs. Auxiliaries

5. Conclusion

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Part 3: Movement

Chapter 10: Head-to-Head Movement

0. Introduction

1. Verb Movement ($V \rightarrow T$)

2. T Movement ($T \rightarrow C$)

3. *Do*-support

Appendix: Determining if a Language has $V \rightarrow T$ Movement

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 11: DP Movement

0. Introduction

1. A Puzzle for the Theory of Theta Roles

2. Passives

3. Case

4. Raising: Reprise

5. Passives: Reprise

[6. Inherently Passive Verbs: Unaccusatives](#)

[7. DP Movement in SVO vs. VSO Languages](#)

[8. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

Chapter 12: *Wh*-movement and Locality Constraints

[0. Introduction](#)

[1. Movement in *Wh*-questions](#)

[2. Relative Clauses](#)

[3. Islands](#)

[4. The Minimal Link Condition](#)

[5. Echo Questions \(*Wh*-in-situ\) in English](#)

[6. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

Chapter 13: A Unified Theory of Movement

[0. Introduction](#)

[1. Move](#)

[2. Explaining Cross-linguistic Differences](#)

[3. Scope, Covert Movement, and the MLC](#)

[4. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

Challenge Problem Sets

Part 4: Advanced Topics

Chapter 14: Ditransitives

0. Introduction

1. The Problem of Ditransitive Verbs

2. The Active Voice Head

3. Object Shift

4. Ditransitives: Reprise

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 15: Raising, Control, and Empty Categories

0. Introduction

1. Raising vs. Control

2. Two Kinds of Raising, Two Kinds of Control

3. Control Theory

4. Another Kind of Null Subject: “Little” *pro*

5. Conclusion

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 16: Ellipsis

0. Ellipsis

1. LF-copying or PF-deletion

2. Antecedent-Contained Deletion and Pseudogapping

3. Conclusion

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 17: Advanced Topics in Binding Theory

0. Introduction

1. Levels of Representation

2. The Definition of Binding Domain

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 18: Polysynthesis, Incorporation, and Non-configurationality

0. Introduction

1. Polysynthesis

2. Incorporation

3. Scrambling and Non-configurationality

4. Conclusion

Ideas, Rules, and Constraints Introduced in this Chapter

General Problem Sets

Challenge Problem Sets

Chapter 19: Merge

0. Introduction

1. External Merge

2. Internal Merge

[3. Conclusion](#)

[Ideas, Rules, and Constraints Introduced in this Chapter](#)

[General Problem Sets](#)

[Challenge Problem Sets](#)

[Conclusions and Directions for Further Study](#)

[References](#)

[Index](#)

[End User License Agreement](#)

Preface and Acknowledgments

Almost every preface to every syntax textbook out there starts out by telling the reader how different this book is from every other syntax textbook. On one hand, this is often the truth: each author shows their own particular spin or emphasis. This is certainly true of this textbook. For example, you'll be hard-pressed to find another textbook on Principles and Parameters syntax that uses as many Irish examples as this one does.. On the other hand, let's face facts. The basic material to be covered in an introductory textbook doesn't really vary much. One linguist may prefer a little more on binding theory, and a little less on control, etc. In this text, I've attempted to provide a relatively balanced presentation of most of the major issues and I've tried to do this in a student-friendly way. I've occasionally abstracted away from some of the thornier controversies, when I felt they weren't crucial to a student understanding the basics. This may make the professional syntactician feel that I've cut corners or laid out too rosy a picture. I did this on purpose, however, to give students a chance to absorb the fundamentals before challenging the issues. This was a deliberate pedagogical choice. I'm well aware that sometimes I've glossed over controversies, but I think a student has to learn the basics of how the system works before they can seriously critique and evaluate the model. This is a textbook, not a scholarly tome, so its aim is to reach as many students as possible. The style is deliberately low-key and friendly. This doesn't mean I don't want the students to challenge the material I've presented here. Throughout the book, you'll find grey "textboxes" that contain issues for further discussion or interesting tidbits. Many of the problem sets also invite the student to challenge the black and white presentation I've given in the

text. I encourage instructors to assign these, and students to do them, as they form an important part of the textbook. Instructors may note that if a favorite topic is not dealt with in the body of the text, a problem set may very well treat the question.

A quick word on the level of this textbook: This book is intended as an introduction to syntactic theory. It takes the student through most of the major issues in Principles and Parameters, from tree drawing to constraints on movement. While this book is written as an introduction, some students have reported it to be challenging. I use this text in my upper-division undergraduate introduction to syntax course with success, but I can certainly see it being used in more advanced classes. I hope instructors will flesh out the book, and walk their students through some of the thornier issues.

This textbook has grown out of my lecture notes for my own classes. Needless to say, the form and shape of these notes have been influenced in terms of choice of material and presentation by the textbooks my own students have used. While the book you are reading is entirely my fault, it does owe a particular intellectual debt to the following three textbooks, which I have used in teaching at various times:

Cowper, Elizabeth (1992) *A Concise Introduction to Syntactic Theory: The Government and Binding Approach*. Chicago: Chicago University Press.

Haegeman, Liliane (1994) *Introduction to Government and Binding Theory (2nd edition)*. Oxford: Blackwell.

Radford, Andrew (1988) *Transformational Grammar: A First Course*. Cambridge: Cambridge University Press.

I'd like to thank the authors of these books for breaking ground in presenting a complicated and integrated theory to the beginner. Writing this book has given me new appreciation for the difficulty of this task and their presentation of the material has undoubtedly influenced mine.

Sadly, during the final stages of putting the first edition of this text together, my dissertation director, teacher, mentor, and academic hero, Ken Hale, passed away after a long illness. Ken always pushed the idea that theoretical syntax is best informed by cross-linguistic research, while at the same time the accurate documentation of languages requires a sophisticated understanding of grammatical theory. These were important lessons that I learned from Ken and I hope students will glean the significance of both by reading this text. While I was writing this book (and much other work) Ken gave me many comments and his unfettered support. He was a great man and I will miss him terribly.

It's hard to believe that I began writing the first drafts of this book twenty two years ago, and now we're going into the 4th edition. A whole generation of syntacticians began their careers with this book and I'm utterly humbled that it has been so useful to people. I hope this new edition, and the 2nd edition of the accompanying workbook will continue to guide people into the world of syntax. The 4th edition has some important changes from the 3rd. I brought back affix lowering for those who loved it. That's now at the end of [chapter 7](#). But I've also kept the selection-based analysis of English Auxiliaries in [chapter 9](#). Instructors can safely do one, the other, or both. I've changed the names of some of the functional categories to reflect current practice. There's a new, albeit cursory, chapter on Merge at the end.

There's new exercises and problem sets in every chapter both in the main book and in the workbook.

Perhaps the most important change to the book is more subtle and may not be initially apparent. While example sentences are just examples and aren't meant to make profound statement with their content, I've learned through the years that they can impact people nonetheless by perpetuating cultural bias. The subconscious messages example sentences can send cannot help but impact readers. Macaulay and Brice (1997) and Pabst et al (2018) have shown that syntax textbooks and journals often have example sentences that show bias towards male actors and female patients. In reviewing the example sentences in the third edition, I discovered that not only was there a gender bias in the examples, but there was an unconscious bias towards white anglophone names and a failure to represent ethnic, racial, sexuality, and gender diversity. So I made a conscious effort to address those biases. Honestly, I probably haven't entirely succeeded but I hope the book is now a little more welcoming and will encourage more women, more gender-diverse people, more people of color, more indigenous people and generally broader range of students to seriously consider syntactic theory as their life's work.

I hope that instructors and students will find these revisions helpful. I have attempted where possible to take into account all the many comments and suggestions I received from people using the previous editions, although of course, in order to maintain consistency, I was unable to implement them all.

Acknowledgments:

I'd like to thank the many people who taught me syntax through the years: Barb Brunson, Noam Chomsky, Elizabeth Cowper, Ken Hale, Alec Marantz, Diane Massam,

Jim McCloskey, Shigeru Miyagawa, and David Pesetsky. A number of people have read through this book or the previous editions and have given me helpful comments; others have helped on smaller issues but have had no less of an impact on the work and still others have contributed problem sets or editorial advice. This long list includes: Dong- Hwan An, David Adger, William Alexander, Dean Allemang, Gabriel Amores, Diana Archangeli, Ash Asudeh, Dali Balti, Brett Baker, Uldis Balodis, Mark Baltin, Luis Barragan, Andy Barss, Michael Bauer, Dane Bell, Emily Bender, Abbas Benmamoun, Jeff Berry, Tom Bever, Bronwyn Bjorkman, Laura Blumenthal, Claire Bower, Joan Bresnan, Aaron Broadwell, Dirk Bury, Ivano Caponigo, Roy Chan, Ronald Charles, Danny Chen, Deborah Chen-Pichler, Jaehoon Choi, Barbara Citko, Ian Clayton, Peter Cole, Chris Collins, Jennifer Columbus, Richard Compton, Andrew Comrie, Robert Coren, Dick Demers, Lorenzo Demery, Sheila Dooley, Rebecca Drinkall, Joe Dupris, Yehuda Falk, Muriel Fisher, Megan Figueroa, Sandiway Fong, Leslie Ford, Amy Fountain, Stefan Frisch, Alexandra Galani, Andrew Garrett, Jila Ghomeshi, David Gil, Carrie Gillion, Erin Good-Ament, Anthony Green, Andrea Haber, Paul Hagstrom, Ken Hale, John Halle, Mike Hammond, Daniel Harbour, Jack Hardy, Heidi Harley, Josh Harrison, Rachel Hayes-Harb, David Heap, Bernhard Heigl, One-Soon Her, Caroline Heycock, Nicky Hoover, Stephan Hurtubise, John Ivens, Eloise Jelinek, Ling Jiang, Alana Johns, Mark Johnson, Hyun Kyoung Jung, Arsalan Kahnemuyipour, Dalina Kallulli, Simin Karimi, Dan Karvonen, Andreas Kathol, Chris Kennedy, Greg Key, Amy LaCross, Erwin Lares, Richard Larson, Péter Lazar, Carlos Gelormini Lezama, Jeff Lidz, Anne Lobeck, Leila Lomashivili, Pen Long, Sarah Longstaff, Alicia Lopez, Ahmad Reza Lotfi, Ricardo Mairal, Joan Maling, Jack Martin, Diane Massam, Jeffrey Maxwell, Martha McGinnis-Archibald, Nathan McWhorter, Dave Medeiros, Jason Merchant, Mirjana

Miskovic-Lukovic, Tel Monks, Kumiko Murasugi, Alan Munn, MaryLou Myers, Jian Gang Ngui, Chris Nicholas, Janet Nicol, Jon Nissenbaum, Peter Norquest, Diane Ohala, Kazutoshi Ohno, Heidi Orcutt-Gachiri, Hiroyuki Oshita, Panayiotis Pappas, Jaime Parchment, Hyeson Park, Barbara Partee, Matt Pearson, David Pesetsky, Colin Phillips, Massimo Piatelli- Palmarini, Carl Pollard, Bill Poser, Kristen Pruett, Jeff Punske, Mike Putnam, Sevren Quijada, Eric Randall, Janet Randall, Marlita Reddy-Hjelmfelt, Jodi Reich, Norvin Richards, Frank Richter, Bob Ritchie, Betsy Ritter, Alexander Robertson, Sharon Rose, Ed Rubin, Jeff Runner, Ivan Sag, Nathan Sanders, Yosuke Sato and his students, Theresa Satterfield, Leslie Saxon, Sylvia Schreiner, Kevin Schluter, Carson Schütze, Jim Scobbie, Deborah Shapiro, Leah Shocket, Dan Siddiqi, Echo Ki Sihui, Peter Slomanson, Kyle Smith, Ryan Walter Smith, Norvel Smith, Nick Sobin, Peggy Speas, Megan Stone, Tania Strahan, Joshua Strauss, Dana Sussman, Maggie Tallerman, Takashi Tanaka, Chris Tancredi, Deniz Tat, Brian ten Eyck, Ariel Theisen, Lisa deMena Travis, Alex Trueman, Adam Ussishkin, Huseyin Uysal, Sakari Vaelma, Robert Van Valin, Martin Walkow, Enwei Wang, Shan Wang, Natasha Warner, Andy Wedel, Jennifer Wees, Jerry Weltman, Mary Ann Willie, Marian Wiseley, Dainon Woudstra, Susi Wurmbrand, Alper Yavuz, Kimberley Young, Kim Youngroung, J.R. Yu, James Yuen, my Facebook friends who I regularly victimized as testers for the problem sets in the book, and several anonymous Blackwell and Wiley reviewers. I'm absolutely convinced I've left someone off this large list. If it is you many apologies – I really did appreciate the help you gave me. The students in my Introduction to Syntax classes in Michigan in 1997, and in Arizona in 1998–2019, have used all or parts of this textbook. Glynis Baguley, Ada Brunstein, Sarah Coleman, Danielle Descoteaux, Lisa Eaton, Simon Eckley, Rachel Greenberg, Charlotte Frost, Graham Frankland, Tami Kaplan, Becky Kennison, Julia Kirk, Meryl

Le Roux, Hannah Lee, Tanya McMullin, Leah Morin, Allison Medoff, Anna Oxbury, Rhonda Pearce, Clelia Petracca, Iain Potter, Venkatnadhan Rajagopalan, Beth Remmes, Jennifer Seward, and Steve Smith of Wiley-Blackwell and their subcontractors all deserve many thanks for help getting this and the previous three editions to press. My family (my mother Jean, my late father Bob, Morag, Fiona, my lost love Pangur, and my new fur kids Crònán, Nechtan and Aoife) were all incredible in their support and love. Go raibh maith agaibh agus tapadh leibh!

The artwork in [chapters 3](#) and [6](#) was created by Dane Bell for this book and is used with permission.

Part 1

Preliminaries

Chapter 1

Generative Grammar

Learning Objectives

After reading chapter 1, you should walk away having mastered the following ideas and skills:

1. Explain why language is a psychological property of humans.
2. Distinguish between prescriptive and descriptive rules.
3. Explain the scientific method as it applies to syntax.
4. Explain the differences between the kinds of data gathering, including corpora and linguistic judgments.
5. Explain the difference between competence and performance.
6. Explain the difference between i-language and e-language
7. Provide at least three arguments for Universal Grammar.
8. Explain the logical problem of language acquisition.
9. Distinguish between learning and acquisition.
10. Distinguish among observational, descriptive, and explanatory adequacy.

0. PRELIMINARIES

Although we use it every day, and although we all have strong opinions about its proper form and appropriate use, we rarely

stop to think about the wonder of language. So-called language “experts” tell us about the misuse of *hopefully* or lecture us about the origins of the word *boondoggle*, but surprisingly, they never get at the true wonder of language: how it actually works as a complex machine. Think about it for a minute. You are reading this and understanding it, but you have no conscious knowledge of how you are doing it. The study of this mystery is the science of **linguistics**. This book is about one aspect of how language works: how sentences are structured, or the study of **syntax** and the people who study syntax are called **syntacticians**.

There are many perspectives on studying linguistics. One could study language looking at languages across time, or one could study how language is used as a social tool. But syntacticians typically take a different view. They look at language as a psychological or cognitive property of humans. That is, my mind contains certain principles that allow me to sit here and produce this set of letters, words and sentences, and you use similar principles that allow you to translate these squiggles back into coherent ideas and thoughts. At least I hope you can translate them back into coherent ideas!

There are several subsystems at work in when we use language. If you were listening to me speak, I would be producing sound waves with my vocal cords and articulating particular speech sounds with my tongue, lips, and vocal cords. On the other end of things, you’d be hearing those sound waves and translating them into speech sounds using your auditory apparatus. The study of the acoustics and articulation of speech is called **phonetics**. Once you’ve translated the waves of sound into mental representations of speech sounds, you analyze them into syllables and pattern them appropriately. For example, speakers of English know that the made-up word *bluve* is a possible word of English, but the word *bnuck* is not. This is part of the science called **phonology**. Then you take these groups of sounds and organize them into meaningful units (called morphemes) and

words. For example, the word *dancer* is made up of two meaningful bits: *dance* and the suffix *-er*. The study of this level of language is called **morphology**. Next you organize the words into phrases and sentences. One usage of the term **syntax** is the cover term for studies at this level of language. Finally, you take the sentences and phrases you hear and translate them into thoughts and ideas. This last step is what we refer to as the **semantic** level of language.

Syntax as a discipline studies the part of language knowledge that lies between words and the meaning of utterances: sentences. It is the level that mediates between sounds that someone produces (organized into words) and what they intend to say.

Perhaps one of the truly amazing aspects of the study of language is not the origins of the word *demerit*, or how to properly punctuate a quote inside parentheses, or how kids have, like, destroyed the English language, eh? Instead it's the question of how we subconsciously get from sounds and words to the meaning of sentences. This is the study of syntax.

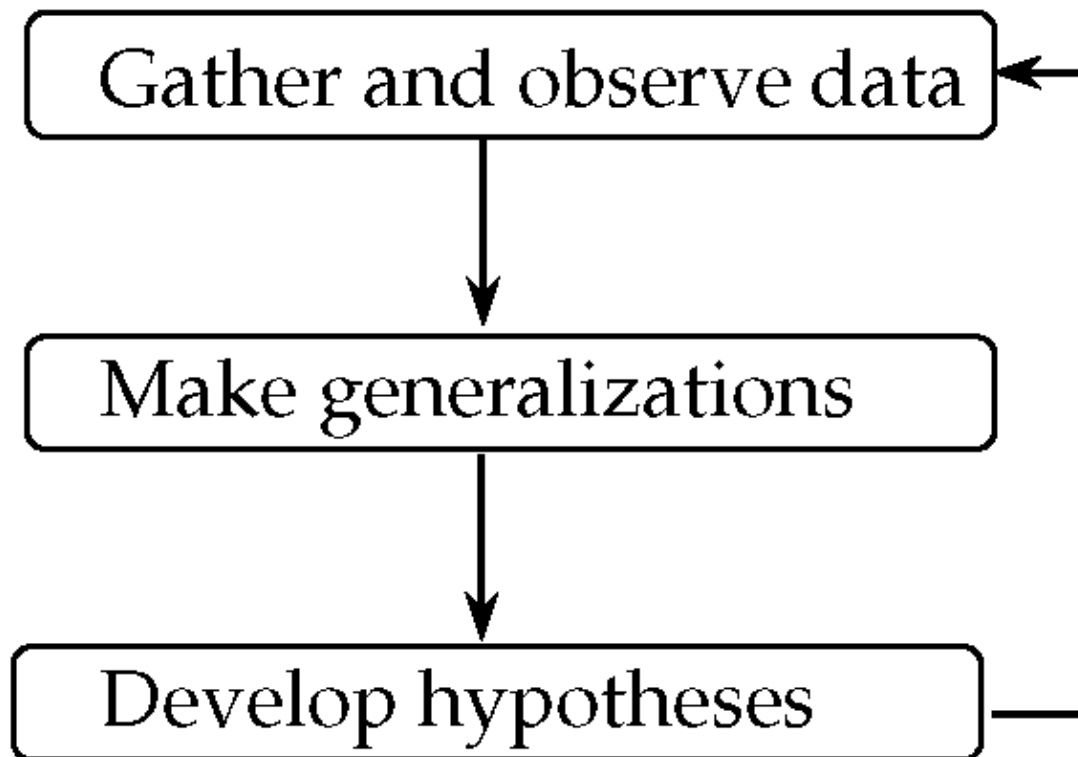
1. SYNTAX AS SCIENCE - THE SCIENTIFIC METHOD

For many people, the study of language properly belongs in the humanities. That is, the study of language is all about the beauty of its usage in fine (and not so fine) literature and its impact on human culture. However, there is no particular reason, other than tradition, that the study of language should be confined to a humanistic approach. It is also possible to approach the study of language from a scientific perspective; this is the domain of linguistics. People who study literature often accuse linguists of abstracting away from the richness of good prose and obscuring the beauty of language. Nothing could be further from the truth. Most linguists, including the present author, enjoy nothing more than reading a finely crafted piece of fiction, and many linguists often study, as a

sideline, the more humanistic aspects of language. This doesn't mean, however, that one can't appreciate and study the formal properties (or rules) of language and do it from a scientific perspective. The two approaches to language study are both valid; they complement each other; and neither takes away from the other¹.

Science is perhaps one of the most poorly defined words of the English language. We regularly talk of scientists as people who study bacteria, particle physics, and the formation of chemical compounds, but ask your average Joe or Jill on the street what science means, and you'll be hard pressed to get a decent definition. But among scientists themselves, *science* typically refers to a particular methodology for study: the deductive scientific method. The scientific method dates back to the ancient Greeks, such as Aristotle, Euclid, and Archimedes. The method involves observing some data, making some generalizations about patterns in the data, developing hypotheses that account for these generalizations, and testing the hypotheses against more data. Finally, the hypotheses are revised to account for any new data and then tested again. A flow chart showing the method is given in (1):

(1)



In syntax, we apply this methodology to sentence structure. Syntacticians start² by observing data about the language they are studying, then they make generalizations about patterns in the data (e.g., in simple English declarative sentences, the subject precedes the verb). They then generate a hypothesis about these patterns and test the hypothesis against more syntactic data, and if necessary, go back and re-evaluate their hypotheses.

Hypotheses are only useful to the extent that they make ***predictions***. A hypothesis that makes no predictions (or worse yet, predicts everything) is useless from a scientific perspective. In particular, the hypothesis must be ***falsifiable***. That is, we must in principle be able to look for some data, which, if true, show that the hypothesis is wrong. This means that we are often looking for the cases where our hypotheses predict that a sentence will be grammatical (and it is not), or the cases where they predict that the sentence will be ungrammatical (contra to fact).

In syntax, hypotheses are called **rules**, and the group of hypotheses that describe a language's syntax is called a **grammar**. The term *grammar* can strike terror into the hearts of people. But you should note that there are two ways to go about writing grammatical rules. One is to tell people how they *should* speak (this is of course the domain of English teachers and copy-editors); we call these kinds of rules **prescriptive rules** (as they prescribe how people should speak according to some standard). Some examples of prescriptive rules include “never end a sentence with a preposition”, “use *whom* not *who*” and “don't split infinitives”. These rules tell us how we are supposed to use our language. The other approach is to write rules that describe how people *actually* speak, whether or not they are speaking “correctly”. These are called **descriptive rules**. Consider for a moment the approach we're taking in this book. Which of the two types (descriptive or prescriptive) is more scientific? Which kind of rule is more likely to give us insight into how the mind uses language? We are going to focus on descriptive rules. This doesn't mean that prescriptive rules aren't important (in fact, in the problem sets section of this chapter you are asked to critically examine the question of descriptive vs. prescriptive rules), but for our purposes descriptive rules are more important.

You now have enough information to answer General Problem Sets GPS1 & 2, as well as Challenge Problem Set CPS1 at the end of this chapter. For practice try Workbook Exercise WBE1 in chapter 1 of The Syntax Workbook, 2nd Edition, an optional companion book to this text.