

AN INTRODUCTION TO LANGUAGE

Fromkin, Rodman, Hyams
Amberber, Cox, Thornton

Australia and New Zealand
9th Edition



An introduction to language

9th Edition

Victoria Fromkin

Robert Rodman

Nina Hyams

Mengistu Amberber

Felicity Cox

Rosalind Thornton

Publishing manager: Dorothy Chiu

Publishing editor: Ann Crabb

Developmental editor: Kate Doherty

Senior project editor: Nathan Katz

Cover designer: Kevin Finn (TheSumOf)

Text designer: Jennai Lee Fai (Jenki Design); Ruth O'Connor

Editor: Stephanie Ayres

Proofreader: Jade Jakovic

Indexer: Julie King

Permissions/Photo researcher: Wendy Duncan

Art direction: Ruth O'Connor; Danielle Maccarone

Typeset by MPS Limited

Any URLs contained in this publication were checked for currency during the production process. Note, however, that the publisher cannot vouch for the ongoing currency of URLs.

Adaptation of *An Introduction to Language* 10th edition, published by Wadsworth, a division of Cengage Learning Inc, ©2014.

This 9th edition published in 2018.

Design imagery courtesy:

Shutterstock/VectoRay; Shutterstock/Artishock;

Shutterstock/Zlatko Guzmic; Shutterstock/Mtsaride.



© 2018 Cengage Learning Australia Pty Limited

Copyright Notice

This Work is copyright. No part of this Work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without prior written permission of the Publisher. Except as permitted under the *Copyright Act 1968*, for example any fair dealing for the purposes of private study, research, criticism or review, subject to certain limitations. These limitations include: Restricting the copying to a maximum of one chapter or 10% of this book, whichever is greater; providing an appropriate notice and warning with the copies of the Work disseminated; taking all reasonable steps to limit access to these copies to people authorised to receive these copies; ensuring you hold the appropriate Licences issued by the Copyright Agency Limited ("CAL"), supply a remuneration notice to CAL and pay any required fees. For details of CAL licences and remuneration notices please contact CAL at Level 15, 233 Castlereagh Street, Sydney NSW 2000, Tel: (02) 9394 7600, Fax: (02) 9394 7601
Email: info@copyright.com.au
Website: www.copyright.com.au

For product information and technology assistance,
in Australia call **1300 790 853**;
in New Zealand call **0800 449 725**

For permission to use material from this text or product, please email aust.permissions@cengage.com

National Library of Australia Cataloguing-in-Publication Data

Creator: Fromkin, Victoria, author.

Title: An introduction to language / Victoria Fromkin; Robert Rodman; Nina Hyams; Mengistu Amberber; Felicity Cox; Rosalind Thornton.

Edition: 9th edition.

ISBN: 9780170386807 (paperback)

Subjects: Language and languages. Linguistics.

Other Creators/Contributors: Rodman, Robert, author. Hyams, Nina, author. Amberber, Mengistu, 1961- author. Cox, Felicity, author. Thornton, Rosalind, author.

Cengage Learning Australia

Level 7, 80 Dorcas Street

South Melbourne, Victoria Australia 3205

Cengage Learning New Zealand

Unit 4B Rosedale Office Park

331 Rosedale Road, Albany, North Shore 0632, NZ

For learning solutions, visit cengage.com.au

Printed in China by China Translation & Printing Services.

1 2 3 4 5 6 7 21 20 19 18 17

BRIEF CONTENTS

PART 1:

THE NATURE OF HUMAN LANGUAGE	1
1 What is language?	2
2 Brain and language	32

PART 2:

GRAMMATICAL ASPECTS OF LANGUAGE	65
3 Morphology: the words of language	66
4 Syntax: the sentence patterns of language	110
5 Semantics and pragmatics: the meanings of language	169
6 Phonetics: the sounds of language	225
7 Phonology: the sound patterns of language	265

PART 3:

THE PSYCHOLOGY OF LANGUAGE	325
8 Language acquisition	326
9 Language processing: humans and computers	380

PART 4:

LANGUAGE AND SOCIETY	433
10 Language in society	434
11 Language change: the syllables of time	497
12 Writing: the ABCs of language	551

CONTENTS

Guide to the text	xii
Guide to the online resources	xiv
Preface	xvi
Acknowledgements	xxi
About the authors	xxii

PART 1:

THE NATURE OF HUMAN LANGUAGE 1

1 What is language? 2

Linguistic knowledge 3

Knowledge of the sound system 3

Knowledge of words 4

The creativity of linguistic knowledge 6

Knowledge of sentences and non-sentences 8

Linguistic knowledge and performance 9

What is grammar? 11

Descriptive grammars 11

Prescriptive grammars 12

Teaching grammars 15

Universal Grammar 16

The development of grammar 17

Sign languages: evidence for language universals 17

What is not (human) language 18

The birds and the bees 19

Can animals learn human language? 21

Summary 24

Further reading 25

Online study resources 27

Exercises 27

Endnotes 31

2 Brain and language 32

The human brain 33

The localisation of language in the brain 34

Aphasia and localisation 35

Further experimental evidence of brain organisation 43

Language and brain development	47
Left-hemisphere lateralisation and brain plasticity in young children	47
The critical period	48
Modularity: dissociations of language and cognition	51
Linguistic savants	51
Specific language impairment	53
Genetic basis of language	54
The evolution of language	55
The development of language in the species	55
Summary	57
Further reading	58
Online study resources	59
Exercises	59
Endnotes	63

PART 2:

GRAMMATICAL ASPECTS OF LANGUAGE 65

3 Morphology: the words of language	66
Content words and function words	68
Morphemes: the minimal units of meaning	70
The discreteness of morphemes	72
Bound and free morphemes	72
Bound roots	76
Rules of word formation	76
Derivational morphology	77
Inflectional morphology	79
The hierarchical structure of words	82
Rule productivity	85
Other morphological processes	88
Meaning of compounds	90
Universality of compounding	92
Sign language morphology	93
Morphological analysis: identifying morphemes	93
Summary	98
Further reading	99
Online study resources	99
Exercises	100
Endnotes	109

4	Syntax: the sentence patterns of language	110
	Our knowledge of syntax	111
	Grammaticality	113
	Sentence structure	115
	Syntactic categories	118
	Selection	124
	Phrase structure	127
	Phrase structure rules	129
	Structural ambiguities	139
	The infinity of language	141
	Transformational analysis	144
	Structure dependence	148
	UG principles and parameters	151
	Sign-language syntax	155
	Summary	157
	Further reading	158
	Online study resources	158
	Exercises	159
	Endnotes	168
5	Semantics and pragmatics: the meanings of language	169
	What speakers know about sentence meaning	170
	Truth	170
	Entailment and related notions	171
	Ambiguity	172
	Compositional semantics	173
	Semantic rules	174
	When compositionality goes awry	177
	Lexical semantics (word meanings)	183
	Theories of word meaning	183
	Lexical relations	185
	Semantic features	190
	Argument structure	194
	Pragmatics	198
	Pronouns and other deictic words	198
	Language and thought	206
	Summary	211
	Further reading	212
	Online study resources	213
	Exercises	214
	Endnotes	224

6	Phonetics: the sounds of language	225
	Speech sounds	225
	Identity of speech sounds	227
	The phonetic alphabet	228
	Articulatory phonetics	232
	Consonants	234
	Phonetic symbols for Australian English consonants	243
	Vowels	244
	Prosodic features	251
	Stress	252
	Tone and intonation	252
	Sound and spelling correspondences	254
	The phonetics of signed languages	256
	Summary	258
	Further reading	259
	Online study resources	260
	Exercises	260
	Endnotes	264
7	Phonology: the sound patterns of language	265
	Phonemes: the phonological units of language	266
	Nasalisation in English: an illustration of vowel allophones	268
	Variation in English /t/: an illustration of consonant allophones	270
	Complementary distribution	271
	Distinctive features	273
	Feature values	274
	Non-contrastive features	275
	Natural classes of speech sounds	277
	Features and rules	279
	Feature specifications for Australian English consonant and vowel phonemes	280
	The rules of phonology	282
	Assimilation	282
	Dissimilation	285
	Feature-change	286
	Segment insertion and deletion	287
	Metathesis	288
	From one to many and from many to one	289
	The function of phonological rules	290

Slips of the tongue: evidence for phonological rules	291
Phonemic analysis: discovering phonemes	292
Prosodic phonology	294
Syllable structure	294
Word stress	295
Sentence and phrase stress	296
Intonation	297
Phonotactics	298
Lexical gaps	300
The pronunciation of morphemes	301
The production of plurals	301
Additional examples of allomorphs	304
Why do phonological rules exist?	306
Optimality Theory	307
An exemplar-based approach to phonology	308
Summary	309
Further reading	310
Online study resources	311
Exercises	311
Endnotes	323

PART 3:

THE PSYCHOLOGY OF LANGUAGE 325

8 Language acquisition 326

Children's capacity for language	327
Learning theories	327
The theory of Universal Grammar	332
Acquiring linguistic knowledge	336
Stages in language acquisition	336
The acquisition of phonology	343
The acquisition of word meaning	345
The acquisition of morphology	347
The acquisition of syntax	351
The acquisition of pragmatics	359
The acquisition of signed languages	359
Knowing more than one language	361
Childhood bilingualism	362

Second-language acquisition	365
Summary	372
Further reading	372
Online study resources	373
Exercises	373
Endnotes	379

9 Language processing: humans and computers 380

The human mind at work: human language processing 380

Comprehension 382

Syntactic processing 389

Speech production 393

Lexical selection 394

Non-linguistic influences 396

Computer processing of human language 396

Computers that talk and listen 397

Speech recognition 398

Speech synthesis 400

Computer models of grammar 409

Text and speech analysis 411

Computational forensic linguistics 419

Trademarks 419

Interpreting legal terms 420

Speaker identification 420

Summary 423

Further reading 425

Online study resources 426

Exercises 427

Endnotes 431

PART 4:

LANGUAGE AND SOCIETY 433

10 Language in society 434

Dialects 435

Regional dialects 436

Dialects of English 438

Social dialects 445

Languages in contact 457

Lingua francas 457

Pidgins 458

Creoles	463
Bilingualism	466
Language and education	469
Second-language teaching methods	469
Teaching reading	470
Bilingual education	472
Language in use	472
Styles	473
Slang	474
Registers	475
Jargon and argot	476
Taboo or not taboo?	477
Language and sexism	480
Secret languages and language games	484
Summary	485
Further reading	486
Online study resources	488
Exercises	488
Endnotes	496
11 Language change: the syllables of time	497
The regularity of sound change	498
Sound correspondences	499
Ancestral protolanguages	499
Phonological change	500
Phonological rules	501
The Great Vowel Shift	502
Morphological change	504
Syntactic change	505
Lexical change	509
Addition of new words	510
Semantic change	517
Broadening	517
Narrowing	517
Meaning shifts	518
Reconstructing dead languages	518
The nineteenth-century comparativists	518
Comparative reconstruction	522
Historical evidence	525
Extinct and endangered languages	527
The genetic classification of languages	530
Languages of the world	531

Types of languages	534
Why do languages change?	537
Summary	541
Further reading	542
Online study resources	543
Exercises	543
Endnotes	550

12 Writing: the ABCs of language **551**

The history of writing	552
Pictograms and ideograms	553
Cuneiform writing	554
The rebus principle	556
From hieroglyphics to the alphabet	557
Modern writing systems	558
Word writing	558
Syllabic writing	559
Consonantal alphabet writing	561
Alphabetic writing	562
Writing and speech	564
Spelling	566
Spelling pronunciations	570
Summary	573
Further reading	574
Online study resources	574
Exercises	575
Endnotes	580

Glossary	581
Index	600

Guide to the text

As you read this text you will find a number of features in every chapter to enhance your study of linguistics and help you understand how the theory is applied in the real world.

A PHONEME LIST FOR AUSTRALIAN ENGLISH

CONSONANTS		VOWELS		
Phoneme	As in	Hearings, Cat & Emma	Phoneme	As in
Stops				
/p/	pat	/p/	/p/	penet
/b/	bat	/b/	/b/	penet
/t/	tip	/t/	/t/	penet
/d/	tip	/d/	/d/	penet
/k/	cat	/k/	/k/	penet
/g/	good	/g/	/g/	penet
Nasals				
/m/	mat	/m/	/m/	penet
/n/	mat	/n/	/n/	penet
/ŋ/	ring	/ŋ/	/ŋ/	penet
Approximants				
/w/	win	/w/	/w/	penet
/r/	rip	/r/	/r/	penet
/l/	lip	/l/	/l/	penet
/j/	rip	/j/	/j/	penet
Fricatives				
/f/	fan	/f/	/f/	penet
/v/	van	/v/	/v/	penet
/θ/	think	/θ/	/θ/	penet
/ð/	this	/ð/	/ð/	penet
/s/	sip	/s/	/s/	penet
/z/	zip	/z/	/z/	penet
/ʃ/	fish	/ʃ/	/ʃ/	penet
/ʒ/	vision	/ʒ/	/ʒ/	penet
/h/	hat	/h/	/h/	penet
Affricates				
/tʃ/	church	/tʃ/	/tʃ/	penet
/dʒ/	judge	/dʒ/	/dʒ/	penet

Lexical categories with examples			
Verb (V)	propose, swim, travel, happen, thought, be, Mary		
Verb (V)	look, run, this, one, have, on, stop, before		
Adjective (Adj)	red, big, happy, quick, together, only, water		
Adverb (Adv)	again, always, together, often, usually, very		
Prepositional phrase (PP)	in, across, over, into, beside, with, of, to, from, before, after, at, on, by		
Phrasal lexical categories with examples			
Verb phrase (VP)	propose, the man, water, stop, his girlfriend, a good thought, the man with the suitcase, a bottle of Coke		
Noun phrase (NP)	meeting, always, when, urban, goes to the city, made me a salad, into the house		
Adjective phrase (AP)	happy, very, old, bright, blue, and with anger, worthy of praise		
Adverbial phrase (AdvP)	frantically, from inside, upon, directly, next, there		
Prepositional phrase (PP)	of linguistics, in the library, at the party, from the city		
Quick tests for lexical categories			
Note: These tests are not foolproof as they both the morphological and the distributional tests.			
Noun	Morphological: Can the word take a plural suffix (e.g. -s, -es)? Distributional: Can the word combine with an article? (e.g. a, the, X)		
Verb	Morphological: Can the word appear after an auxiliary? (e.g. will, X, would, X) Distributional: Can the word take a reflexive or possessive pronoun? (e.g. X, X-self) Distributional: Can the word be used with an adverb? (e.g. X, quickly, X, often)		
Adjective	Morphological: Can the word be used with a modifier? (e.g. very, X, well) Distributional: Can the word be positioned between a determiner and a noun? (e.g. the X, X, a X, X)		
Adverb	Morphological: Can the word be preceded by very? (e.g. very X, quickly). This test can also identify adverbs. Distributional: Can the word take a reflexive or possessive pronoun? (e.g. X, X-self). This test also identifies adjectives. Distributional: Is the word grammatically when positioned between a determiner and a noun? (e.g. the X, X, a X, X)		
Prepositional phrase	Morphological: Does the preposition and a noun form an idiom? (e.g. with, X, X) Distributional: Can the word be followed by a noun phrase? (e.g. X, the house)		
Functional categories with examples			
Determiner (Det)	this, a, the, his, some, each, every, two, several, this, those		
Auxiliary (Aux)	have, do, be, can, may, might, must, shall, should, would, could		
Complementiser (C)	that, if, so, whether		
Conjunction (Conj)	and, or, but		
Pronouns			
Person	Subject pronouns	Object pronouns	Possessive pronouns
1 st	I, me	me, me	mine, mine
2 nd	you	you	yours, yours
3 rd (masculine)	he, him	him, him	his, his
3 rd (feminine)	she, her	her, her	hers, hers
3 rd (neutral)	it, its	it, its	its, its

Inside the front cover you'll find a quick reference list of symbols that are used to represent the sounds of Australian English.

You can also use the summary tables inside the back cover while you are learning about syntax.

PART-OPENING FEATURES

GRAMMATICAL ASPECTS OF LANGUAGE

- 3 Morphology: the words of language 66
- 4 Syntax: the sentence patterns of language 110
- 5 Semantics and pragmatics: the meanings of language 169

The **Chapter list** outlines the chapters contained in each part for easy reference.

CHAPTER-OPENING FEATURES

LEARNING OBJECTIVES

After reading Chapter 1, you should be able

- understand the arbitrary relation between
- distinguish between linguistic knowledge
- distinguish between descriptive and prescriptive
- understand the relationship between grammar and language structure that may hold across
- explain the difference between human language

Identify the key concepts that the chapter will cover with the **Learning objectives** at the start of each chapter.

FEATURES WITHIN CHAPTERS

localisation

The hypothesis that different areas of the brain are responsible for distinct cognitive systems; see lateralisation.

The localisation of language in the brain

An issue of central concern has been to determine human linguistic abilities. In the early nineteenth century, the idea of **localisation**, which is the idea that different human linguistic functions are located in specific parts of the brain. In light of our current particular views are amusing. He proposed, for example, that the left and right lobes of the brain because as a young man he had

When you see **Key terms** marked in bold, study the **definitions** nearby to learn important vocabulary. See the **Glossary** at the back of the book for a full list of key terms and definitions.

GLOSSARY

abbreviation

The shortened form of a word.

accent (of a speaker)

The phonology or pronunciation of a specific dialect; may be native or non-native.

accidental gap

Phonological or morphological form that constitutes a possible but non-occurring

adverb (Adv)

The syntactic category of words that qualify the verb, such as manner adverbs like *quickly* and time adverbs like *soon*. Some adverbs, such as *very*, qualify adjectives.

The position of the adverb in the sentence depends on its semantic type, e.g. *John will soon eat lunch, John eats lunch quickly.*

adverb phrase (AdvP)**allophone**

A predicted variant of a phoneme.

alpha

Acronym for the first letter of the alphabet.

END-OF-CHAPTER FEATURES

SUMMARY

The attempt to understand what makes language acquisition and use possible has led to research on the brain–mind–language relationship. Neurolinguistics is the study of the brain mechanisms and anatomical structures that underlie linguistic competence and performance. Much neurolinguistic research is centred on experimental and behavioural data from people with impaired or atypical language. These results greatly enhance our understanding of language structure and acquisition.

The brain is the most complicated organ of the body, controlling motor and sensory activities and thought processes. Research conducted over a century reveals that different parts of the brain control different body functions. The nerve cells that form the outer layer of the brain are called the cortex, which serves as the intellectual decision maker, receiving messages from the sensory organs and initiating all voluntary actions. The brain of all higher animals is divided into

Review your understanding of the key chapter topics with the **Summary**.

FURTHER READING

- Adams, M J 1996, *Beginning to read*, MIT Press, Cambridge, MA.
 Biber, D 1988, *Variation across speech and writing*, Cambridge University Press, Cambridge, UK.
 Coe, M D and Van Stone, M 2016, *Reading the Maya glyphs*, 2nd edn, Thames & Hudson Ltd, Verlag.
 Collister, L 2015, 'Emoticons and symbols aren't ruining language – they're revolutionizing it', *The Conversation*, <https://theconversation.com/au>, retrieved 24 November 2016.
 Coulmas, F 1989, *The writing systems of the world*, Blackwell, Cambridge, MA.
 Crystal, D 2008, *Tetragrammaton*, Oxford University Press, London.
 Cummings, D W 1988, *American English spelling*, Johns Hopkins University Press, Baltimore.
 Daniels, P T and Bright W (eds) 1996, *The world's writing systems*, Oxford University Press, New York.
 DeFrancis, J 1989, *Visible speech: The diverse oneness of writing systems*, University of Hawaii Press, Honolulu.

Extend your understanding through the suggested **Further reading** relevant to each chapter.

EXERCISES

- 1 Besides distinguishing grammatical from ungrammatical strings, the rules of syntax account for other kinds of linguistic knowledge, such as:
- when a sentence is structurally ambiguous (e.g. *The boy saw the man with a telescope*)
 - when two sentences of different structure mean the same thing (e.g. *The father wept silently* and *The father silently wept*)
 - when two sentences of different structure and meaning are nonetheless structurally related, such as declarative sentences and their corresponding interrogative form (e.g. *The boy can sleep* and *Can the boy sleep?*).
- In each case, draw on your linguistic knowledge of English to provide an example different from the ones in the chapter, and explain why your example illustrates the point. If you know a language other than English, provide examples in that language, if possible.

Test your knowledge and consolidate your learning through the end-of-chapter **exercises**. Those marked **challenge exercise** encourage you to go beyond the text to stretch your understanding.

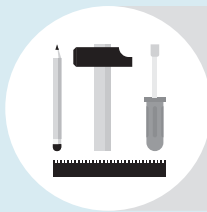
Guide to the online resources

FOR THE INSTRUCTOR

Cengage Learning is pleased to provide you with a selection of resources that will help you prepare your lectures and assessments. These teaching tools are accessible via cengage.com.au/instructors for Australia or cengage.co.nz/instructors for New Zealand.

CourseMateExpress

CourseMate Express is your one-stop shop for learning tools and activities that help students succeed. As they read and study the chapters, students can access revision quizzing, online video activities, matching pairs activities, annotated weblinks and more. CourseMate Express also features the Engagement Tracker, a first-of-its-kind tool that monitors student engagement in the content. Ask your Learning Consultant for more details.



ANSWER KEY

The **answer key** provides instructors with suggested solutions to all of the end-of-chapter exercises in the text.



POWERPOINT™ PRESENTATIONS

Use the chapter-by-chapter **PowerPoint** slides to enhance your lecture presentations and handouts by reinforcing the key principles of linguistics.



WORD-BASED TEST BANK

This bank of questions has been developed in conjunction with the text for creating quizzes, tests and exams for your students. Deliver these through your LMS and in your classroom.



ARTWORK FROM THE TEXT

Add the digital files of **figures** and **diagrams** into your course management system, use them in student handouts, or copy them into your lecture presentations.

FOR THE STUDENT

New copies of this text come with an access code that gives you a 12-month subscription to the **CourseMate Express** website.

Visit <http://login.cengagebrain.com> and log in using the access code card.

You will find:

- An interactive phoneme list so that you can hear the sounds of Australian English
- Additional exercises for revising syntax (Chapter 4) and phonemic transcription (Chapter 6)
- Revision quizzes
- Interactive activities
- Online video activities
- Annotated weblinks
- and more tools to help you excel in your studies.



PREFACE

Well, this bit which I am writing, called Introduction, is really the er-h'r'm of the book, and I have put it in, partly so as not to take you by surprise, and partly because I can't do without it now. There are some very clever writers who say that it is quite easy not to have an er-h'r'm, but I don't agree with them. I think it is much easier not to have all the rest of the book.

A A Milne, *The Christopher Robin Birthday Book*

The last thing we find in making a book is to know what we must put first.

Blaise Pascal

Interest in linguistics – the study of human language – has existed throughout history. Many of the questions discussed in this book have been asked for thousands of years. What is language? What do you know when you know a language? What is the origin of language? Is language unique to the human species? Why are there so many languages? Where do they come from? How are they related? How do children learn language? Are some languages (or dialects) superior to others? Are some languages simpler than others? What do all languages have in common? What is the neurological basis of human language? What parts of the brain are concerned with language? Can computers be taught to speak and understand human language? These are only a few of the questions that have piqued curiosity about language.

In addition to a philosophical interest in such questions, there are many other reasons that linguists, psychologists, philosophers, educators, sociologists, legal experts, neurologists, communication engineers and computer scientists need to understand the nature of human language. New developments in linguistics have wide ranging impact in education, health science, sociology, psychology, law, medicine, technology and communication.

In light of the importance of linguistics in so many diverse disciplines, the first eight (Australian) editions of this textbook were directed towards students in a wide variety of courses. The book has been used in linguistics and non-linguistics courses, at all levels from undergraduate to postgraduate, for students in fields as diverse as computer science, English, foreign languages, speech pathology, anthropology, communications and philosophy. The ninth Australian edition follows in this tradition, but further extends and updates the content to make it suitable for an even wider audience. Students will gain insight into current linguistic issues and develop a better understanding of debates appearing in the national media. We hope that this book will help to dispel certain common misconceptions that people have about language and language use.

We have provided many new exercises and problem sets in this edition so that students can apply their knowledge of linguistic concepts to novel data. This will help to consolidate learning and further test comprehension of the material in the text. More research-oriented exercises have also been added for those instructors who wish their students to pursue certain topics more deeply. Some exercises

are marked as ‘challenge’ exercises if they go beyond the scope of what is ordinarily expected in a first course in language study. An answer key is available to instructors to assist them in areas outside of their expertise. Chapter 1 continues to be a concise introduction to the general study of language. It includes many ‘hooks’ for engaging students in language study, including discussions of signed languages; a consideration of animal ‘languages’; a treatment of language origins; and the occasional silliness of self-appointed mavens of ‘good’ grammar who beg us not to carelessly split infinitives and who find sentence-ending prepositions an abomination not to be put up with.

The second chapter, ‘Brain and language’, retains its forward placement in the book because we believe that one can learn about the brain through language, and about the nature of the human being through the brain. This chapter may be read and appreciated without technical knowledge of linguistics. When the centrality of language to human nature is appreciated, students will be motivated to learn more about human language, and about linguistics, because they will be learning more about themselves. As in the previous edition, highly detailed illustrations of MRI and PET scans of the brain are included, and this chapter highlights some of the new results and tremendous progress in the study of neurolinguistics over the past few years. In particular, we have added a new section on how MEG (magnetoencephalography) can be used to study aspects of our linguistic knowledge. The arguments for the autonomy of language in the human brain are carefully crafted so that the student sees how experimental evidence is applied to support scientific theories.

Chapter 3 launches the book into the study of grammar with morphology, the study of word formation, as that is the most familiar aspect of grammar to most students. The subject is treated with clarity and an abundance of simple illustrations from non-English languages to emphasise the universality of word structure, including the essentials of derivational versus inflectional morphology, free and bound morphemes, and the hierarchical structure of words.

The syntax chapter has been substantially rewritten. Many instructors have noted that recent school English curricula include little teaching of grammar, and have requested that the text cover more foundational knowledge. Chapter 4 now has an expanded section on the various syntactic categories, and ways to identify parts of speech. Our feedback has shown that our students would benefit more from studying the basics of sentence structure than learning about current views on X-bar phrase structure. For this reason, we have not followed the US edition in moving to X-bar theory. Instead, we have chosen to introduce students to the more intuitive earlier system of phrase structure rules with ternary branching trees, leaving X-bar theory for more advanced courses on syntax. The text introduces students to phrase structure rules slowly and systematically, incorporating many example tree structures. While our focus is necessarily on the sentence structure of English, we have introduced cross-linguistic examples where possible. This edition includes an updated section on sign language syntax. The intention in the syntax chapter is to enhance the student’s understanding of the differences among languages as well as the universal aspects of grammar. Nevertheless, the introductory spirit of these chapters is not sacrificed, and students gain a deep understanding of word and phrase structure with a minimum of formalisms and a maximum of insightful examples and explanations, supplemented as always by quotes, poetry and humour.

Chapter 5, on semantics, has been more finely structured so that the challenging topics of this complex subject can be digested in smaller pieces. Still based on the theme of ‘What do you know about meaning when you know a language?’ the chapter first introduces students to truth-conditional semantics and the principle of compositionality. Following that are discussions of what happens when compositionality fails, as with idioms, metaphors and anomalous sentences. Lexical semantics takes up various approaches to word meaning, including the concepts of reference and sense, semantic features, argument structure and thematic roles. The most dramatic upgrade of this chapter is a newly expanded and modernised section on pragmatics. Here we discuss and illustrate in depth the influence of situational versus linguistic context on the communicative content of utterances, the significance of implicature in comprehension, Grice’s maxims of conversation, presuppositions and J L Austin’s speech acts.

Chapter 6, on phonetics, introduces the notion of phoneme and allophone at the beginning of the chapter to set the scene for discussion of different levels of analysis. In this chapter the revised transcription system for Australian English, based firmly on the principles of the International Phonetic Alphabet is introduced. This system is essential for the study of Australian English speech patterns. The text fully adheres to the International Phonetics Association (IPA) notation conventions. The taxonomic classification system for describing the sounds of the world’s languages is introduced with particular reference to articulatory processes that are necessary to create individual speech sounds. Consonants, vowels, tone and intonation are illustrated through examples from a range of languages. Chapter 7, on phonology, reinforces the concept of phoneme and allophone and highlights some important allophonic processes that occur in English. This chapter retains numerous Australian English and other language problems and examples to illustrate the important theoretical concepts relating to the patterns of sounds in language. Material in this chapter continues to be presented so that the student can appreciate the need for formal theories through real-world examples.

The chapters comprising Part 3, ‘The psychology of language’, have been rewritten and restructured for clarity. Chapter 8, ‘Language acquisition’, is still rich in data from English and other languages. Bilingualism and L2 acquisition are taken up in detail, and a thoroughly revised section on L2 teaching methods is included. This edition introduces both usage-based approaches to language acquisition as well as the generative approach that has traditionally been introduced in this text. The arguments for innateness and Universal Grammar that language acquisition provides are, nevertheless, exploited to show the student how scientific theories of great import are discovered and supported through observation, experiment and reason. As in most chapters, Australian Sign Language (Auslan) is discussed, and its important role in understanding the biological foundations of language is emphasised.

In Chapter 9, the section on psycholinguistics has been updated to conform to recent discoveries, and the section on computational linguistics reflects advances in machine translation, speech synthesis, speech recognition and language understanding. Anchoring the extensive new material in this chapter is the introduction of the Culturomic Revolution in the computer processing of language, in which computers have analysed billions (with a *b*) of lines of text with results that will astonish even the most blasé readers. Culturomics, which is concerned with published, written texts, is soon to be augmented by ‘Twitterology’, a study of ‘on-the-fly’ language usage by billions of people

(i.e. ‘twitterers’) in thousands of languages, only beginning to be linguistically analysed as this edition goes to press. But those who wish to keep abreast of the power of computers applied to language will find this chapter indispensable.

Part 4 is concerned with language in society, including sociolinguistics and historical linguistics. Chapter 10 emphasises the important relationship between language and society and includes a focus on the concept of social dialect and style. Pidgins and creoles are discussed with greater reference to Aboriginal and Torres Strait Islander languages. The section on Māori has been expanded. The ‘Language in use’ section takes up slang, profanity, racial epithets, euphemisms and similar topics. Attitudes towards language and how they reflect the views and mores of society are also included in this chapter. We also discuss topics such as English spoken by non-native speakers and so-called standard languages. A section on language and sexism reflects a growing concern with this topic. An expanded list of references in this chapter is a valuable resource for further study.

Chapter 11, on language change, has undergone a few changes. The section ‘Extinct and endangered languages’ has been completely rewritten and brought up-to-date to reflect the intense interest in this critical subject. The same is true of the section ‘Types of languages’, which now reflects the latest research. In response to reviewers’ requests, a detailed and more complex illustration of the application of the comparative method to two contemporary dialects to reconstruct their ancestor – often called ‘internal reconstruction’ – is now part of this chapter.

Chapter 12, on writing systems, is unchanged from the previous edition with the exception of a mild rewriting to further improve clarity. Texting and twittering, while largely unstudied by linguists, are included in a new section, adding a further dimension to what it means to write a language.

Key terms, which are bold in the text, are defined in the margin close to where they appear, as well as in the revised glossary at the end of the book. The glossary has been expanded and improved so that this edition provides students with a linguistic lexicon of nearly 550 terms, making the book a worthy reference volume.

The order of presentation of Chapters 3 through 7 was once thought to be non-traditional. Our experience, backed by previous editions of the book and the recommendations of colleagues throughout the world, has convinced us that it is easier for the novice to approach the structural aspects of language by first looking at morphology (the structure of the most familiar linguistic unit, the word), followed by syntax (the structure of sentences), which is also familiar to many students, as are numerous semantic concepts. We then proceed to the more novel (to students) phonetics and phonology, which students often find daunting. However, the book is written so that individual lecturers can present material in the traditional order of phonetics, phonology, morphology, syntax and semantics (Chapters 6, 7, 3, 4 and 5) without confusion, if they wish.

This new Australian edition continues to reflect the study of linguistics in Australia by taking account of the place of language in Australian society and by basing its detailed description of English on the Australian English dialect. The phonemic symbols, for example, are those that are in standard use in this country, and the discussion of social and regional variation in Chapter 10 continues to focus on Australia and New Zealand. This book assumes no previous knowledge on the part of the reader. An updated list of references at the end of each chapter is included to accommodate any reader who

wishes to pursue a subject in more depth. Each chapter concludes with a summary and exercises to enhance the student's interest in, learning and comprehension of the textual material. We wish to thank the reviewers of this edition. We have benefited greatly from discussions with and suggestions from friends, colleagues, students, lecturers, tutors and reviewers of the last edition. If this text is better than the last, it is because of them. The responsibility for errors in fact or judgement is, of course, ours. We hope that the continual updates we make to the book improve its quality and the user experience. Finally, we wish to say thank you to the lecturers who have used the earlier editions; without them and their students there would be no new edition.



ACKNOWLEDGEMENTS

Cengage Learning and the authors would like to thank the following reviewers, who provided incisive and helpful feedback:

Amelia Dowe, The University of Southern Queensland

Andreea Calude, The University of Waikato

Zaneta Mok, Australian Catholic University

Diane Johnson, The University of Waikato

Carmella Hollo, The University of New South Wales

Hossein Shokouhi, Deakin University,

Elaine Ballard, The University of Auckland

David Bradley, La Trobe University

Alan Libert, The University of Newcastle.

We would also like to thank David Blair, Mark Harvey and Peter Collins for their major contributions to previous editions, and Adam Schembri for his valuable help in reviewing and updating this edition's sections on sign languages.

Every attempt has been made to trace and acknowledge copyright holders. Where the attempt has been unsuccessful, the publisher welcomes information that would redress the situation.

ABOUT THE AUTHORS

Victoria Fromkin was Professor of Linguistics and a member of the faculty of the University of California, Department of Linguistics from 1966 until her death in 2000. She served as its chair from 1972–1976. Dr Fromkin published more than one hundred books, monographs and papers on topics concerned with phonetics, phonology, tone languages, African languages, speech errors, processing models, aphasia and the brain/mind/language interface.

Robert Rodman was a Professor of Linguistics and Computer Science at North Carolina State University. His research interests included computational forensic linguistics, speech processing, and in particular, lip synchronisation and voice recognition.

Nina Hyams is Professor of Linguistics and co-director of the UCLA Psycholinguistics Laboratory and the UCLA Infant Language Laboratory. Her main areas of research are childhood language development and syntax. She is author of the book *Language Acquisition and the Theory of Parameters* (D. Reidel publishers, 1986) a milestone in language acquisition research. She has also published numerous articles on the development of syntax and morphology in children.

Mengistu Amberber is a Senior Lecturer in Linguistics at the University of New South Wales. His main research interests include the syntax–semantics interface (with particular reference to generative grammar) and linguistic typology. He is the co-editor of *Complex Predicates: Cross-linguistic Perspectives on Event Structure* (Cambridge University Press, 2010).

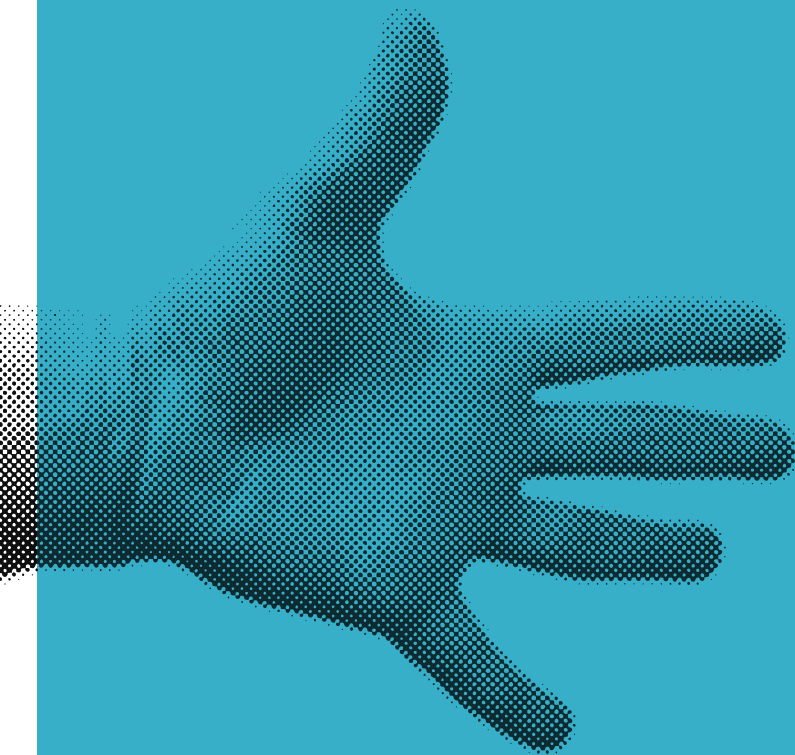
Felicity Cox is an Associate Professor in the Department of Linguistics at Macquarie University. She is the Linguistics Department director of undergraduate studies and convenor of the Bachelor of Speech, Hearing and Language Sciences program. She teaches phonetics and phonology at undergraduate and postgraduate level, and has published widely on the phonetics and phonology of Australian English. Felicity is the author of *Australian English: Pronunciation and Transcription*, 2nd edition (Cambridge University Press, 2017).

Rosalind Thornton is an Associate Professor in the Department of Linguistics at Macquarie University and a researcher in the Centre of Excellence for Cognition and its Disorders. Rosalind teaches introductory linguistics, child language acquisition and syntax. Her research focuses on the acquisition of syntax in typically-developing children, and children with Specific Language Impairment.

PART 1

THE NATURE OF HUMAN LANGUAGE

- 1 What is language? 2
- 2 Brain and language 32



Reflecting on Noam Chomsky's ideas on the innateness of the fundamentals of grammar in the human mind, I saw that any innate features of the language capacity must be a set of biological structures, selected in the course of the evolution of the human brain.

S E Luria, *A Slot Machine, a Broken Test Tube, an Autobiography*, 1984

The nervous systems of all animals have a number of basic functions in common, most notably the control of movement and the analysis of sensation. What distinguishes the human brain is the variety of more specialised activities it is capable of learning. The pre-eminent example is language.

Norman Geschwind, *Specializations of the Human Brain*, 1979

Linguistics shares with other sciences a concern to be objective, systematic, consistent and explicit in its account of language. Like other sciences, it aims to collect data, test hypotheses, devise models and construct theories. Its subject matter, however, is unique: at one extreme it overlaps with such 'hard' sciences as physics and anatomy; at the other, it involves such traditional 'arts' subjects as philosophy and literary criticism. The field of linguistics includes both science and the humanities, and offers a breadth of coverage that, for many aspiring students of the subject, is the primary source of its appeal.

David Crystal, *The Cambridge Encyclopedia of Language*, 2010

1

WHAT IS LANGUAGE?



When we study human language, we are approaching what some might call the 'human essence', the distinctive qualities of mind that are, so far as we know, unique to man.



Noam Chomsky, *Language and Mind*, 1972

LEARNING OBJECTIVES

After reading Chapter 1, you should be able to:

- understand the arbitrary relation between linguistic form and meaning
- distinguish between linguistic knowledge (competence) and linguistic behaviour (performance)
- distinguish between descriptive and prescriptive rules of grammar
- understand the relationship between grammatical rules of individual languages and principles of language structure that may hold across all languages
- explain the difference between human language and the communicative systems of other animals.

Whatever else people do when they come together – whether they play, fight, make love or make cars – they talk. We live in a world of language. We talk to our friends, our associates, our wives and husbands, our lovers, our teachers, our parents, our rivals and even our enemies. We talk to bus drivers and total strangers. We talk face-to-face and over the telephone, and everyone responds with more talk. Television and radio further swell this torrent of words. Hardly a moment of our waking lives is free from words and even in our dreams we talk and are talked to. We also talk when there is no-one to answer. Some of us talk aloud in our sleep. We talk to our pets and sometimes to ourselves.

The possession of language, perhaps more than any other attribute, distinguishes humans from other animals. To understand our humanity, one must understand the nature of language that makes us human. According to the philosophy expressed in the myths and religions of many peoples, language is the source of human life and power. To some people of Africa, a newborn child is a *kintu*, a 'thing', not yet a *muntu*, a 'person'. Only by the act of learning language does the child become a human being. According to this tradition, then, we all become human because we all know at least one language. But what does it mean to know a language?

LINGUISTIC KNOWLEDGE

Do we know only what we see, or do we see what we somehow already know?

Cynthia Ozick, 'What Helen Keller Saw', *New Yorker*, 16 and 23 June 2003

When you know a language, you can speak and be understood by others who know that language. This means you have the capacity to produce sounds that signify certain meanings and to understand or interpret the sounds produced by others. But language is more than speech. Deaf people produce and understand **sign languages** just as hearing people produce and understand spoken languages.

Almost everyone knows at least one language. Five-year-old children are nearly as proficient at speaking and understanding as their parents. Yet the ability to carry out the simplest conversation requires profound knowledge that most speakers are unaware of. This is true for speakers of all languages, from Albanian to Zulu. A speaker of English can produce a sentence that has two relative clauses without knowing what a relative clause is, such as:

My goddaughter, who was born in Sweden and who now lives in Australia, is named Disa, after a Viking queen.

In a parallel fashion, a child can walk without understanding or being able to explain the principles of balance and support or the neurophysiological control mechanisms that permit one to do so. The fact that we may know something unconsciously is not unique to language.

What, then, do speakers of English or Quechua or French or Arrente or Arabic know?

Knowledge of the sound system

Part of knowing a language means knowing what sounds (or **signs**)¹ are in that language and what sounds are not. One way this unconscious knowledge is revealed is by the way speakers of one language pronounce words from another language. If you speak only English, for example, you may substitute an English sound for a non-English sound when pronouncing 'foreign' words such as French *ménage à trois*. If you pronounce it as the French do, you are using sounds outside the English sound system.

French people speaking English often pronounce words such as *this* and *that* as if they were spelled *zis* and *zat*. The English sound represented by the initial letters *th* in these words is not part of the French sound system, and the French mispronunciation reveals the speaker's unconscious knowledge of this fact.

Knowing the sound system of a language includes more than knowing the inventory of sounds. It means also knowing which sounds may start a word, end a word and follow each other. The name of a former president of Ghana was *Nkrumah*, pronounced with an initial sound like the sound ending the English word *sink*. Although this is an English sound, no word in English begins with the *nk* sound. Speakers of English who have occasion to pronounce this name often mispronounce it (by Ghanaian

sign language

A language used by deaf people in which linguistic units, such as morphemes and words as well as grammatical relations, are formed by manual and other body movements.

sign

A single gesture (possibly with complex meaning) in the sign languages used by the deaf.

standards) by inserting a short vowel sound, such as *Nekrumah* or *Enkrumah*. Similarly, the first name of the New Zealand mystery writer *Ngaimo Marsh* is usually mispronounced in this way, or by simply ignoring the *g* altogether. Children who learn English recognise that *nk* does not begin a word, just as Ghanaian and Māori children learn that words in their language may begin with the *nk* sound.

We will learn more about sounds and sound systems in Chapters 6 and 7.



Knowledge of words

Knowing the sounds and sound patterns in our language constitutes only one part of our linguistic knowledge. Knowing a language means also knowing that certain sequences of sounds signify certain concepts or meanings. Speakers of English know what *boy* means, and that it means something different from *toy* or *girl* or *pterodactyl*. When you know a language, you know words in that language; that is, which sequences of sounds are related to specific meanings and which are not.

Arbitrary relation of form and meaning

“ The minute I set eyes on an animal I know what it is. I don’t have to reflect a moment; the right name comes out instantly. I seem to know just by the shape of the creature and the way it acts what animal it is. When the dodo came along he [Adam] thought it was a wildcat. But I saved him. I just spoke up in a quite natural way and said, ‘Well, I do declare if there isn’t the dodo!’ ”

Mark Twain, *Eve’s Diary*, 1906

If you do not know a language, the words (and sentences) of that language will be mainly incomprehensible because the relationship between speech sounds and the meanings they represent in the languages of the world is, for the most part, an **arbitrary** one. When you are acquiring a language, you have to learn that the sounds represented by the letters *house* signify the concept ; if you know French, this same meaning is represented by *maison*; if you know Spanish, by *casa*, if you know Amharic, by *bet*. Similarly,  is represented by *hand* in English, *main* in French, *nsa* in Twi, and *ruka* in Russian. The same sequence of sounds can represent different meanings in different languages. The word *bolna* means ‘speak’ in Hindu-Urdu and ‘aching’ in Russian; *bis* means ‘devil’ in Ukrainian and ‘twice’ in Latin; a *pet* means ‘a domestic animal’ in English and ‘a fart’ in Catalan; and the sequence of sounds *taka* means ‘hawk’ in Japanese, ‘fist’ in Quechua, ‘a small bird’ in Zulu, and ‘money’ in Bengali.

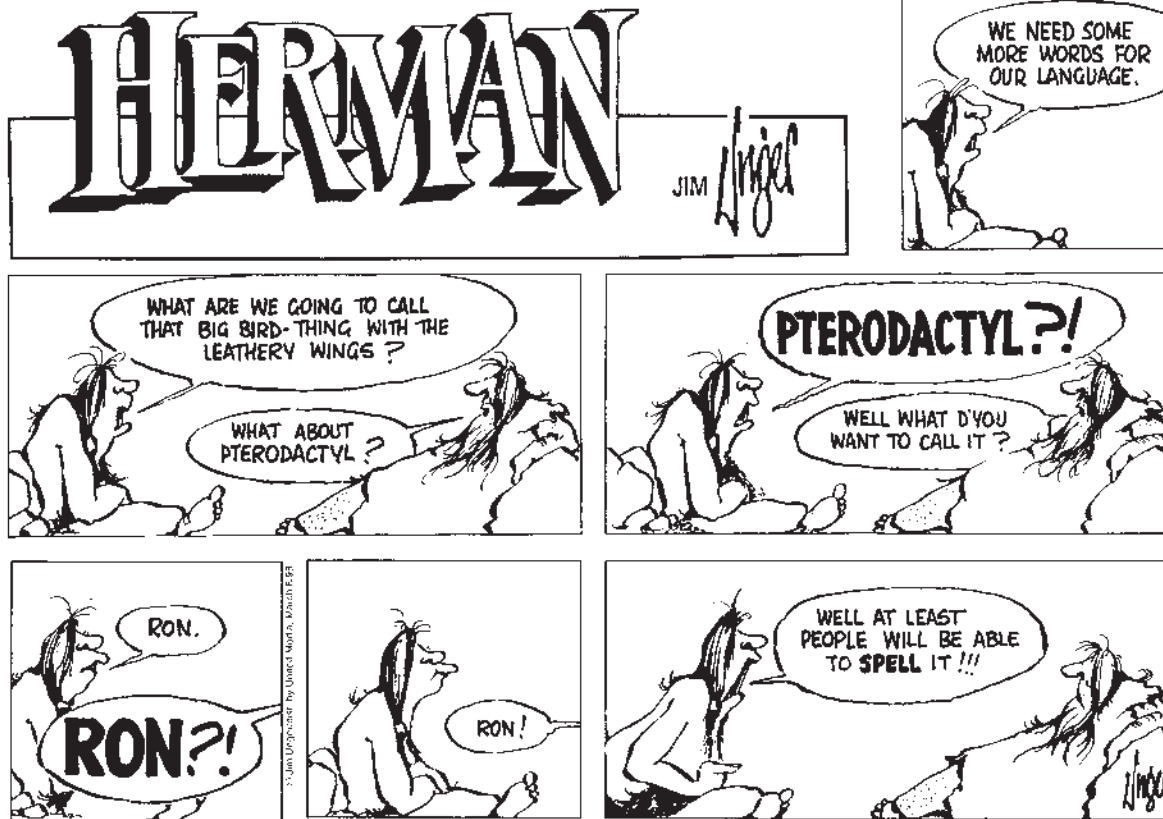
These examples show that the words of a particular language have the meanings they do only by convention. Despite what Eve would have us believe in Mark Twain’s satire *Eve’s Diary*, a *pterodactyl* could have been called a *ron*, *blick* or *kerplunkity*.

As Juliet says in Shakespeare’s *Romeo and Juliet*:

“ What’s in a name? That which we call a rose
By any other name would smell as sweet. ”

arbitrary

Describes the property of language, including sign language, whereby there is no natural or intrinsic relationship between the way a word is pronounced (or signed) and its meaning.



Herman®/LaughingStock Licensing Inc., Ottawa, Canada

convention/ conventional

The agreed-on, though generally arbitrary, relationship between the form and meaning of words.

form

The phonological or gestural representation of a morpheme or word.

meaning

The conceptual or semantic aspect of a sign or utterance that permits us to comprehend the message being conveyed. Expressions in language generally have both form – pronunciation or gesture – and meaning.

sound symbolism

The notion that certain sound combinations occur in semantically similar words, e.g. *gl* in *gleam*, *glisten*, *glitter*, which all relate to vision.

onomatopoeia/ onomatopoeic

Refers to words whose pronunciations suggest their meaning, e.g. *meow*, *buzz*.

This **conventional** and arbitrary relationship between **form** (sounds) and **meaning** (concept) of a word in spoken languages is also true of many signs in sign languages. If you see someone using a sign language you do not know, it is doubtful you will understand much of the message from the signs alone. A person who knows Chinese Sign Language (CSL) would find it difficult to understand Australian Sign Language (Auslan) and vice versa.

For some signs, the relationship between form and meaning was originally not arbitrary. The Auslan sign meaning ‘tomorrow’, for example, may have originated as a compound of signs meaning ‘one’ and ‘sleep’. Over time this has changed, just as the pronunciation of words may change; now, the sign is formed by a ‘one’ handshape moving away from the cheek. These signs become conventional, so that the forms of the handshape, movement and location do not reveal its meaning any longer.

There is some **sound symbolism** in language – that is, words whose pronunciation suggests their meaning. Most languages contain **onomatopoeic** words such as *buzz* or *murmur* that imitate the sounds associated with the objects or actions they refer to. But even here the sounds differ from language to language, reflecting the particular sound system of the language. In English *cock-a-doodle-doo* is an onomatopoeic word whose meaning is ‘the crow of a rooster’, whereas in Finnish

the rooster's crow is *kukkokiekuu*. Forget *gobble gobble* when you're in Istanbul; a turkey in Turkey goes *glu-glu*.

Sometimes particular sound sequences seem to relate to a particular concept. In English many words beginning with *gl* relate to sight, such as *glare, glint, gleam, glitter, glossy, glaze, glance, glimmer, glimpse* and *glisten*. However, such words are a very small part of any language, and *gl* may have nothing to do with 'sight' in another language or even in other words in English, such as *gladiator, glucose, glory, glutton, globe* and so on.

To know a language we must know words of that language. But no speaker knows all the entries in an unabridged dictionary, and even if someone did, he or she would still not know that language. Imagine trying to learn a foreign language by buying a dictionary and memorising words. No matter how many words you learned, you would not be able to form the simplest phrases or sentences in the language, or understand a native speaker. No one speaks in isolated words. Of course, you could search in your tourist's dictionary for individual words to find out how to say something like 'car – petrol – where?' After many tries, a native speaker might understand this question and then point in the direction of a service station. If the speaker answered you with a sentence, however, you probably would not understand what was said; nor would you be able to look it up, because you would not know where one word ended and another began. Chapter 4 will explore how words are put together to form phrases and sentences, and Chapter 5 will explore word and sentence meanings.

The creativity of linguistic knowledge

Albert: So are you saying that you were the best friend of the woman who was married to the man who represented your husband in divorce?

André: In the history of speech, that sentence has never been uttered before.

Neil Simon, *The Dinner Party*, 2000

Knowledge of a language enables you to combine sounds to form words, words to form phrases and phrases to form sentences. You cannot buy a dictionary of any language with all its sentences because no dictionary can list all the possible sentences. Knowing a language means being able to produce and understand new sentences never spoken before. This is the **creative aspect**, or **creativity, of language**. Not every speaker of a language can create great literature, but everybody who knows a language can create and understand new sentences.

In pointing out the creative aspect of language, Chomsky made a powerful argument against the behaviourist view of language that prevailed in the first half of the twentieth century, which held that language is a set of learned responses to stimuli. While it is true that if someone steps on our toes we may automatically respond with a scream or a grunt, these sounds are not part of language. They are involuntary reactions to stimuli. After we automatically cry out, we can then go on to say, 'Thank you very much for stepping on my toe because I was afraid I had elephantiasis, but

creative aspect, creativity of language

Speakers' ability to combine the finite number of linguistic units of their language to produce and understand an infinite range of novel sentences.

because I could feel it hurt I know I don't', or any one of an infinite number of sentences, because the particular sentence we produce is not controlled by a stimulus.

Even some involuntary cries, such as *ouch*, are constrained by our own language system, as are the filled pauses that are sprinkled through conversational speech, such as *er*, *uh* and *you know* in English. They contain only the sounds found in the language. French speakers, for example, often fill their pauses with the vowel sound that starts their word for 'egg' – *oeuf* – a sound that does not occur in English. Knowing a language includes knowing what sentences are appropriate in various situations. Saying 'Minced steak costs five dollars a kilo' after someone has just stepped on your toe would hardly be an appropriate response, although it would be possible.

Our creative ability is not only reflected in what we say, but also includes our understanding of new or novel sentences. Consider the following sentence: *Ben Hall decided to become a bushranger because he dreamed of pigeon-toed giraffes and cross-eyed elephants dancing in pink skirts and green berets on the wind-swept sands of the Nullarbor*. You may not believe the sentence, you may question its logic, but you can understand it, although you have probably never heard or read it before now.

Knowledge of a language, then, makes it possible to understand and produce new sentences. If you counted the number of sentences in this book that you have seen or heard before, the number would be small. Next time you write an essay or a letter, see how many of your sentences are new. Few sentences are stored in your brain, to be pulled out to fit some situation or matched with some sentence that you hear. Novel sentences never spoken or heard before cannot be stored in your memory.

Simple memorisation of all the possible sentences in a language is impossible in principle. If for every sentence in the language a longer sentence can be formed, then there is no limit to the length of any sentence and therefore no limit to the number of sentences. In English you can say:

This is the house.

or

This is the house that Jack built.

or

This is the malt that lay in the house that Jack built.

or

This is the dog that worried the cat that killed the rat that ate the malt that lay in the house that Jack built.

And you need not stop there. How long, then, is the longest sentence? A speaker of English can say:

The old man went.

or

The old, old, old, old, old man went.

How many 'olds' are too many? Seven? Twenty-three?

It is true that the longer these sentences become, the less likely we would be to hear or to say them. A sentence with 276 occurrences of 'old' would be highly unlikely in either speech or writing,

even to describe Methuselah. But such a sentence is theoretically possible. If you know English, you have the knowledge to add any number of adjectives as modifiers to a noun and to form sentences with indefinite numbers of clauses, as in *the house that Jack built*.

All human languages permit their speakers to form indefinitely long sentences; creativity is a universal property of human language.

The fact of human linguistic creativity was well expressed more than 400 years ago by Huarte de San Juan (1530–1592): ‘Normal human minds are such that ... without the help of anybody, they will produce 1000 (sentences) they never heard spoke of ... inventing and saying such things as they never heard from their masters, nor any mouth’.

Knowledge of sentences and non-sentences

● A person who knows a language has mastered a system of rules that assigns sound and meaning in a definite way for an infinite class of possible sentences. ●

Noam Chomsky, *Language and Mind*, 1972

Our knowledge of language not only allows us to produce and understand an infinite number of well-formed (even if silly and illogical) sentences. It also permits us to distinguish well-formed (grammatical) from ill-formed (ungrammatical) sentences. This is further evidence of our linguistic creativity because ungrammatical sentences are typically novel, not sentences we have previously heard or produced, precisely because they are ungrammatical! Consider the following sentences:

- 1
 - a John kissed the little old lady who owned the shaggy dog.
 - b Who owned the shaggy dog John kissed the little old lady.
 - c John is difficult to love.
 - d It is difficult to love John.
 - e John is anxious to go.
 - f It is anxious to go John.
 - g John, who was a student, flunked his exams.
 - h Exams his flunked student a was who John.

If you were asked to put an asterisk before the examples that seemed ill formed or ungrammatical or no good to you, which ones would you choose? (The **asterisk *** is used before examples that speakers reject for any reason. This notation will be used throughout the book.) Our intuitive knowledge about what is or is not an allowable sentence in English leads us to put an asterisk before *b*, *f* and *h*. Which ones did you choose? Would you agree with the following judgements?

- 2
 - a What he did was climb a tree.
 - b *What he thought was want a sports car.
 - c Drink your beer and go home!
 - d *What are drinking and go home?

asterisk

The symbol * used to indicate ungrammatical or anomalous examples, e.g. *cried the baby, *sincerity dances; also used in historical and comparative linguistics to represent a reconstructed form.

- e I expect them to arrive a week from next Thursday.
- f *I expect a week from next Thursday to arrive them.
- g Linus lost his security blanket.
- h *Lost Linus security blanket his.

If you find the sentences with asterisks unacceptable, as we do, you see that not every string of words constitutes a well-formed sentence in a language. Our knowledge of a language determines which strings of words are well-formed sentences, and which are not. Therefore, in addition to knowing the words of the language, linguistic knowledge includes rules for forming sentences and making the kinds of judgements you made about the examples in (1) and (2) above. These rules must be finite in length and finite in number so they can be stored in our finite brains. Yet they must permit us to form and understand an infinite set of new sentences. They are not rules determined by a judge or a legislature, or even rules taught in a grammar class. They are unconscious rules that we acquire as young children as we develop language.

Returning to the question we posed at the beginning of this chapter – what does it mean to know a language? It means knowing the sounds and meanings of many, if not all, of the words of the language, and the rules for their combination – the grammar, which generates infinitely many possible sentences. We will have more to say about these rules of grammar in later chapters.

LINGUISTIC KNOWLEDGE AND PERFORMANCE

“What’s one and one and one and one and one and one and one and one and one and one and one?” ‘I don’t know’, said Alice. ‘I lost count.’ ‘She can’t do Addition’, the Red Queen interrupted.

Lewis Carroll, *Through the Looking-Glass*, 1871

Our linguistic knowledge permits us to form longer and longer sentences by joining sentences and phrases or adding modifiers to a noun. Whether we stop at three, five or eighteen adjectives, it is impossible to limit the number we could add if desired. Very long sentences are theoretically possible, but they are highly improbable. Evidently, there is a difference between having the knowledge necessary to produce sentences of a language and applying this knowledge. It is a difference between what we know – our **linguistic competence** – and how we use this knowledge in actual speech production and comprehension – our **linguistic performance**.

Speakers of all languages have the knowledge to understand or produce sentences of any length. However, there are physiological and psychological reasons that limit the number of adjectives, adverbs, clauses and so on that we actually produce and understand. Speakers may run out of breath, lose track of what they have said or die of old age before they are finished. Listeners may become confused, tired, bored or disgusted.

linguistic competence

The knowledge of a language represented by the mental grammar that accounts for speakers’ linguistic ability and creativity. For the most part, linguistic competence is unconscious knowledge.

linguistic performance

The use of linguistic competence in the production and comprehension of language; behaviour as distinguished from linguistic knowledge.