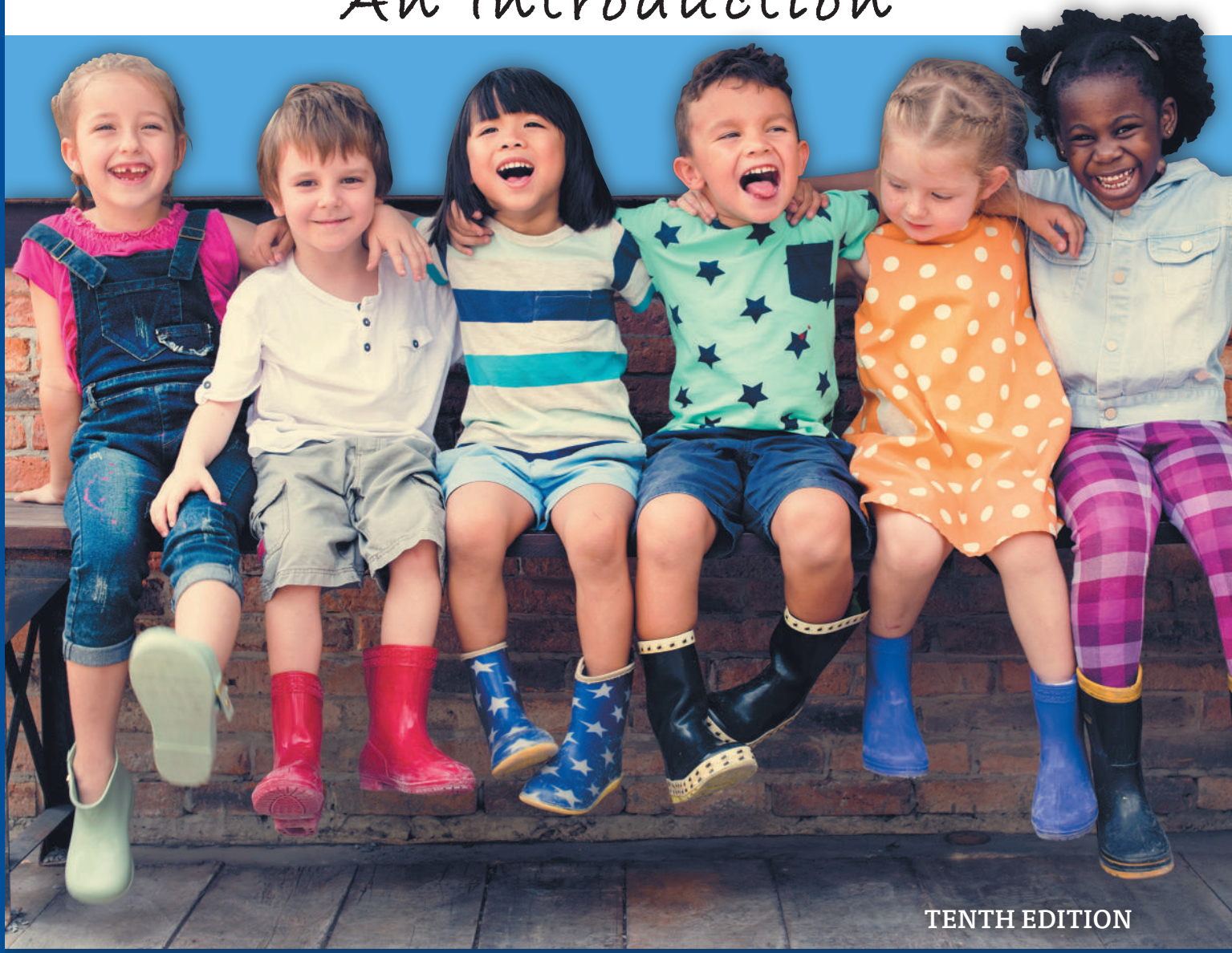
LANGUAGE DEVELOPMENT

An Introduction



TENTH EDITION

Robert E. Owens, Jr.

This page is intentionally left blank

Tenth Edition

Language Development

An Introduction

Robert E. Owens, Jr.
College of Saint Rose

Pearson

Director and Publisher: Kevin Davis
Portfolio Manager: Aileen Pogran
Managing Content Producer: Megan Moffo
Content Producer (Team Lead): Faraz Sharique Ali
Content Producer: Deepali Malhotra
Portfolio Management Assistant: Maria Feliberty
Digital Development Editor: Christina Robb
Executive Product Marketing Manager: Christopher Barry
Executive Field Marketing Manager: Krista Clark
Procurement Specialist: Deidra Headlee
Cover Design: Pearson CSC, Jerilyn Bockorick
Cover Art: Rawpixel.com/Shutterstock
Media Producer: Autumn Benson
Full Service Vendor: Pearson CSC
Full Service Project Management: Pearson CSC, Kabilan S.
Editorial Project Manager: Pearson CSC, Jennylyn Rosiento
Printer/Binder: LSC Communications, Inc.
Cover Printer: Phoenix Color/Hagerstown
Text Font: Palatino LT Pro

Copyright © 2020, 2016, 2012 by Pearson Education, Inc. 221 River Street, Hoboken, NJ 07030. 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, without the prior written permission of the publisher. Printed in the United States.

Acknowledgements of third-party content appear on page in text, which constitute an extension of this copyright page.

Unless otherwise indicated herein, any third-party trademarks that may appear in this work are the property of their respective owners and any references to third-party trademarks, logos, or other trade dress are for demonstrative or descriptive purposes only. Such references are not intended to imply any sponsorship, endorsement, authorization, or promotion of Pearson's products by the owners of such marks, or any relationship between the owner and Pearson Education, Inc., or its affiliates, authors, licensees, or distributors.

Library of Congress Cataloging-in-Publication Data
Names: Owens, Robert E., Jr., 1944- author.
Title: Language development : an introduction / Robert E. Owens, Jr.
Description: Tenth edition. | [Hoboken, New Jersey] : Pearson Education, Inc., [2019] | Includes bibliographical references and indexes.
Identifiers: LCCN 2018041386 | ISBN 9780135206485 | ISBN 0135206480
Subjects: LCSH: Language acquisition.
Classification: LCC P118 .O93 2019 | DDC 401/.93—dc23 LC record available at https://lccn.loc.gov/2018041386

1 19

Pearson

ISBN 10: 0-135-20648-0
ISBN 13: 978-0-135-20648-5

"Say that again. I didn't hear you. I was listening to my toast."

Jessica Owens, age 4

To my gran'kids,
Cassidy, Dakota, and Zavier.

Preface

There is no single way in which children learn to communicate. Each child follows an individual developmental pattern just as you did. Still, it is possible to describe a pattern of general communication development and of English specifically. This text attempts such descriptions and generalizations but emphasizes individual patterns, too.

New to This Edition

For those readers familiar with older editions, you'll find much has changed and, hopefully, much that you'll like. The changes in the 10th edition of *Language Development: An Introduction* are as follows:

- I rewrote the entire section on working memory in light of the plethora of new research on this topic and its importance for language use.
- I provided new video links. Although YouTube provides a wealth of videos and I have used them in the past, several professors had written to me to tell me that the links no longer worked. Still, I encourage you to look to YouTube for examples of children using language.
- Although I've resisted an entire chapter on bilingualism and dialectal differences because it highlights difference rather than stressing similarity, I have consolidated the bilingual research into Chapter 8 in an effort to make it seem less disjointed.
- Several students have told me they enjoy that unlike other texts this one seems to talk to them. Encouraged by this feedback, I have continued to improved readability throughout with more thorough explanations and clarification/simplification of terms.
- Chapter 2 is shorter and reconceptualized to include learning theories. There is always the pull between more professors who have a linguistic background and those with less theoretical training. As in the past I've tried to keep the text practical and employ theories where they enlighten and not make the text into a doctrinaire thesis.
- As in the past, I've provided more child language examples throughout to better illustrate language structures.
- At the suggestion of several respected colleagues, I have increased the discussion of the importance of play for development of language.
- In addition, I broke up and simplified the discussion of reading comprehension, which was needlessly difficult and entangled.
- And, of course, I updated the research. I spent more than 8 months just reading before I even began to edit. For those compulsive types who count number of bibliographic entries, you'll find approximately 250 new references along with several retirements of older material. This is the result of reading several hundred new research articles.

That's enough to exhaust me just talking about it. My hope is that you'll also find the new edition very useful.

Hopefully, those of you who will one day become parents should appreciate the value of this text as a guideline to development. If you plan to work with children with disabilities and without, you'll find that typical development can provide a model for evaluation and intervention. The developmental rationale can be used to decide on targets for training and to determine the overall remediation approach.

In recognition of the importance of the developmental rationale as a tool and of the changing perspectives in child language development, the 10th edition offers expanded coverage of preschool- and school-age language development. Pragmatics receives increased attention, as does the conversational context within which most language development occurs. If you're a prospective speech-language pathologist, you will find these developmental progressions valuable when making decisions concerning materials to use with children who have speech and language impairments. As consumers of educational and therapeutic products, you must be especially sensitive to the philosophy that governs the organization of such materials. Many materials claim to be developmental in design but are not. I recall opening one such book to find *please* and *thank you* as the first two utterances to be taught to a child with deafness. These words violate many of the characteristics of first words.

Experienced teachers, psychologists, or speech-language pathologists need not rely on such prepackaged materials if they have a good base in communication development. An understanding of the developmental process and the use of a problem-solving approach can be a powerful combination in the hands of creative clinicians.

Acknowledgments

A volume of this scope must be the combined effort of many people fulfilling many roles, and this one is no exception.

My first thanks go to all those professionals and students, too numerous to mention, who have corresponded or conversed with me and offered criticism or suggestions for this edition. The overall organization of this text reflects the general organization of my own communication development course and that of professionals with whom I have been in contact.

The professional assistance of several people has been a godsend. The College of Saint Rose is an environment that encourages collaboration and individual professional growth, and it's a great place to work. I would like to thank the faculty of the Department of Communication Sciences and Disorders and the entire faculty and administration at the College of St. Rose in Albany, New York. What a wonderful place to call home. The college places a premium on scholarship, student education, professionalism, and a friendly and supportive workplace environment and recognizes the importance of our field. I am indebted to all for making my new academic home welcoming and comfortable. I am especially thankful to President Carolyn Stefanco, School of Education Interim Dean Terry Ward, my chair Jim Feeney, and my colleagues in my department, fellow department members Robin Anderson, Elizabeth Baird, Marisa Bryant, Sarah Coons, Dave DeBonis, Jessica Evans, Colleen Fluman, Elaine Galbraith, Julie Hart, Director of Clinical Services Jackie Klein, Zhaleh Lavasani, Deirdre Muldoon, Jack Pickering, Melissa Spring, Lynn Stephens, and Julia Unger and recently retired colleagues Anne Rowley and Barbara Hoffman. You have all made me feel welcomed and valued.

Others included in my list are:

- Dr. Addie Haas, retired professor in the Communication Disorders Department at State University of New York at New Paltz, is a dear friend; a trusted confident; a good buddy; a fellow hiker; a skilled clinician; a source of information, ideas, and inspiration; my go-to person to bounce ideas around; and a helluva lot of fun. I will never forget our adventures together.
- My brilliant professional colleague and friend Stacey L. Pavelko, Ph.D., at James Madison University with whom I am currently authoring Sampling Utterances and Grammatical Analysis Revised (SUGAR). SUGAR is a language sample analysis (LSA) tool, and you can visit us at www.sugarlanguage.org to learn more. I've alluded to SUGAR in Appendix D.
- My dear friend Professor Omid Mohamadi has kept me alert to new possibilities and given me a fresh perspective on the field of speech-language pathology. I look forward to more collaborations.

Additionally, I would like to thank the reviewers of this 10th edition: Karen Copple - Eastern New Mexico University, Pamela De Jarnette - Southern Connecticut State University, and Cecilia H. Jeffries - South Carolina State University.

I would also like to express my love and appreciation to my children, Jason, Todd, and Jessica, who are as beautiful as adults as they were as youngsters; to my gran'kids, Cassidy, Dakota, and Zavier, whose language is sprinkled throughout this book; and to my colleague, Moon Byungchoon.

I'm also indebted to past and present graduate assistants Denise Bambinelli, Leah Condemi, Anne Feldman, Zhaleh Lavasani, and Ann Nguyen, who helped me analyze language samples from which much research continues to flow. Student researchers have included Katherine Allen, Marisa Benson, Shelby Brand, Sara Carver, Amanda Cassaro, Alyssa Cavallari, Mary Coble, Katherine Davies, Kristin DiDonato, Alanna Egan, Lynda Feenaughty, Karen Figliotti, Erin Filippini, Melissa Galvin, Holly Garrison, Eileen Gorpfert, Jessica Gormley, Megan Gray, Maggie Hadlock, Anne Halstead, Jennifer Harp, Stephanie Halvax, Samantha Hartnett, Kelsey Hogel, Katelynn Imagna, Elizabeth Johnson, Marc Johnson, Andrew Kanuck, Nicole Kenney, Sara Korman, Katie Kreidler, Amy LaFleur, Nicole LeFever, Stephanie Loccisano, Katherine Lyle, Carolyn Mahon, Catherine Manoni, Dani Mansi, Alexis Mazzeo, Kerry McTiernan, Leanne Meidenbauer, MacKenzie Mitchell, Jordan Nieto, Heidi Pappert, Madelyn Petrovich, Kaitlyn Raffe, Jessica Raes, Kaitlyn Risberg, Jyl Ristau, Ashley Saunders, Catherine Sligar, Lauren Smith, William Springer, Andrea Sorber, Sara Starowicz, Kristen Stewart, Mary-Clare Stokes, Lauren Szpakowski, Eric Tyler, Lauren Ware, Margaret Wayne, Kristina Whelpley, Kathryn Wind, Sara Young, and Sarah Zielaskowski.

Thanks all,
Bob Owens

Contents

This page is intentionally left blank

Chapter 1
The Territory

Monkey Business Images/Shutterstock

Objectives

Before we can discuss language development, we need to agree on what language is and what it is not. Don't worry; as a user of language, you already know a great deal about it. This chapter will organize your knowledge and provide some labels for the many aspects of language you know. Don't panic—introductory chapters usually contain a lot of terminology so that we can all "speak the same language" throughout the text. When you have completed this chapter, you should be able to:

1.1 Explain the differences among speech, language, and communication

1.2 List the main properties of language

1.3 Differentiate the five components of language and their descriptions

1.4 Describe what a dialect is, its relation to its parent language, and the factors that determine dialects

Key Terms

After reading this chapter you should know the following important terms:

antonym
bilingual
bound morpheme
code switch
communicative competence
deficit approach
dialects
discourse
free morpheme
language
linguistic competence
linguistic performance
metalinguistics
morpheme
morphology
nonlinguistic cues
paralinguistic codes
phoneme
phonology
pragmatics
register
selection restrictions
semantic features
semantics
sociolinguistic approach
speech
style shifting
suprasegmental devices
synonym
syntax
vernacular
word knowledge
world knowledge

Language and how you learn and process it are incredibly complex. In fact, despite the struggles you may have had with some academic courses, they were nothing compared to the task of learning language. Trying to explain language learning and use is the job of professionals called *linguists*, or language scientists. These specialists try to deduce rules and patterns demonstrated when we, as users of a language, communicate with one another. For example, a linguist may try to explain why some children say, "I eated a ice cream" or why you occasionally use the wrong word even when you know the correct one. Some of this is what will explore throughout this text.

You're already a mature language user, but let's imagine that you encounter human language for the first time. Even if you had the most sophisticated computer-based code-breaking software, it would be nearly impossible to figure out the many ways in which humans use language. For that task, you would need to decipher each of the 6,000 human languages and gain extensive knowledge of human interactions, emotions, and cultures. Even our best computers when programmed for language sound wooden or rigid. The nuances and naturalness of language are missing. In other words, language is more than just the sum of all the parts. There's a human element. To understand language, we need to consider it in the natural contexts in which it occurs. The meaning of a simple "Sure, why not" can vary greatly depending on what's happening when it's said.

Language is the premier achievement of humans, and using it is something that nearly all of us can do. For example, the average adult English speaker produces about 150 words a minute, selecting each from between 30,000 and 60,000 alternatives stored in the speaker's brain, choosing from a myriad of English language grammatical

structures, and making less than 0.1% errors! That's impressive! As a college student, you most likely exceed even this impressive standard.

These feats become all the more amazing when you realize that with very little instruction, the typical 4-year-old child has already deciphered much of American English and has well-developed speech, language, and communication skills. This is truly remarkable given the complexity of the task!

You probably don't recall much about your own language acquisition. One statement is probably true: Unless you experienced difficulty, there was no formal instruction. Congratulations, you did most of it on your own. Now, we're going to attempt something almost as momentous . . . trying to explain it all!

To appreciate the task involved in language learning, you need to be familiar with some of the terminology that is commonly used in the field. All the terms introduced in this chapter and throughout the text are summarized for you in the Glossary. The remainder of this chapter is devoted to an explanation of these terms. First, we discuss this text in general. Then we distinguish three often-confused terms—speech, language, and communication—and look at some special qualities of language itself. Finally, we'll examine dialects.

Video Example 1.1: The Most Important Language You Will EVER Learn contains a great TED Talk by Poet Ali on language, languages and communication, especially the universality of some forms of communication. In addition, it's amusing.
Source: https://youtu.be/488ZBeaGo6s

This Text and You

Although the full title of this text is *Language Development: An Introduction*, it is not a watered-down or cursory treatment of the topic. For many of you this will be your only language development course. For this reason, I've attempted to cover every timely, relevant, and important aspect of language development that might be of interest to the future speech-language pathologist, educator, psychologist, child development specialist, or parent. People will look to you for answers and explanations. The information you'll need to know is complex and specific.

No doubt you've at least thumbed through this book. It may look overwhelming. It's not. I tell my own students that things are never as bleak as they seem at the beginning of the semester. In the past 40 years, I have taken more than 5,000 of my own students through this same material with a nearly 100% success rate. Let me try to help you find this material as rewarding to learn as it is to teach.

The text is organized into two sections. The few chapters provide a background that includes terms, theories, and information on the brain and language. I know it's difficult to have to read this material when you really want to get to the development part, but believe me, all this background is necessary. The main topics of development are contained in the remaining chapters, which are organized sequentially from newborns through adults. Yes, adults, even you are still learning language and adapting to changes.

As with any text, there are a few simple rules that can make the learning experience more fruitful.

- Note the chapter objectives prior to reading the chapter and be alert for this information as you read. That's the key information to remember.
- Read each chapter in small doses, and then let it sink in for a while. The worst thing to do is put it off until the night before the test.
- Find the chapter organization described at the end of each chapter's introduction. This will help you know where we're going and follow me through the material.

- Take brief notes as you read. Don't try to write everything down. Stop at natural divisions in the content, and ask yourself what was most important. Periodic summarizing is a great learning strategy.
- Review your notes when you stop reading and before you begin again the next time. This process will provide a review and some continuity.
- Try to read a little every day or every other day. That's a good long-term learning strategy. I say long-term because if you are a speech-language pathology student, you'll be seeing a lot more about language in your studies.
- Note the key terms in the chapter objectives, and try to define them as you read. Each one is printed in blue in the body of the chapter. Please don't just thumb through or turn to the Glossary for a dictionary definition. The terms are relatively meaningless out of context. They need the structure of the other information. Context is very important.
- Try to answer the questions throughout each chapter. They'll help you think more deeply about the material.
- I have tried to de-emphasize linguists, authors, and researchers by placing all citations in parentheses. Unless your professor calls your attention to a specific person, she or he may not wish to emphasize these individuals either. It may be a waste of time to try to remember who said what about language development. "He said–she said" memorization can be very tedious. The exceptions, of course, are individuals mentioned specifically by name in lecture and in the text.
- Make ample use of the weblinks and videos to enhance your understanding. Additional information is always good.

I hope that these suggestions will help, although none is a guarantee.

Roll up your sleeves, set aside adequate time, and be prepared to be challenged. Actually, your task is relatively simple when compared to the toddler faced with deciphering the language she or he hears, but that will have to wait for a few chapters. Let's get started.

Speech, Language, and Communication

We'll be studying the changes that occur in *speech, language*, and *communication* as children grow and develop. You might think of these terms as having similar meanings or as being identical. Actually, they're very different and denote different aspects of development and use.

Speech

Speech is a verbal or spoken means of communicating. Other ways of communicating include but are not limited to writing, drawing, and manual signing. Speech is a process that requires very precise neuromuscular coordination and results from planning and executing specific motor sequences. Each spoken language has specific sounds or phonemes, such as "s" or /s/, plus sound combinations, such as "sl" of /sl/, that are characteristic of that language. In addition, speech involves other components, such as voice quality, intonation, and rate. These components enhance the meaning of the message. For example, you probably talk faster when you're excited.

A highly complicated acoustic or sound event, speech is unlike any other environmental noise. Not even music achieves the level of complexity found in speech. Take a simple word such as *toe* and say it very, very slowly. The initial sound is an almost inhuman "tsch." This is followed by "o . . . w" in which your rounded mouth gradually tightens. Now say *toe* at normal speed and note how effortlessly this is done. Say it again and note how your brain integrates the signal as it comes in, creating the unified *toe*. You are a truly amazing being!

Speech is not the only means of face-to-face human communication. We also use gestures, facial expressions, and body posture to send messages. In face-to-face conversation, these nonspeech means may carry up to 60% of the information exchanged.

Although humans are not the only animals that make sounds, to my knowledge, no other species can match the variety and complexity of human speech sounds. These qualities are the result of the unique structures of the human vocal or voice tract, a mechanism that is functional months before the first words are spoken. As an infant, you spent much of the first year experimenting with your vocal mechanisms and producing a variety of sounds. Gradually, these sounds come to reflect the language of your environment.

Language

Individual speech sounds are meaningless noises until some regularity is added. The relationship between individual sounds, meaningful sound units, and the combination of these units is specified by the rules of a language. Language can be defined as a socially shared code or system for representing concepts through the use of symbols and rules that govern how they're combined. The symbols or words are actually arbitrary. If you just heard the word *shoe* out of context, you'd have no idea of its meaning. Nothing about the word suggests something to wear on your foot. Fortunately, speakers

Monkey Business Images/Shutterstock

Humans use language to communicate through a number of means, such as reading, writing, speaking, and listening.

of a language know the meanings of these symbols, which they organized in certain predictable ways to convey ideas.

English is a language, as is Spanish or Navajo. Each has its own unique symbols and rules for symbol combinations. Languages are not monolithic. They contain dialects, subcategories of the parent language that use similar but not identical rules. All users of a language follow certain dialectal rules. For example, I sometimes find myself reverting to my childhood dialectal usage in saying "*acros**t*** the street" and "open your ***um***brella."

Languages change and evolve. Interactions between languages naturally occur in bilingual communities. Under certain circumstances, language mixing may result in a new form of both languages being used in that community (Backus, 1999). When I was a child, we said "tidal wave"; now because of the influence of Japanese, we say "tsunami."

Some languages flourish while others wither. In 2012, for example, there were fewer than 50 individuals who fluently spoke Seneca, a western New York Native American language. It is hoped by the Seneca Nation that this will change with an education and revitalization program.

The death of languages is not a rare event in the modern world. Languages face extinction as surely as plants and animals do. When Kuzakura, an aged woman, died in western Brazil in 1988, the Umutina language died with her. It is estimated that as many as half the world's 6,000 languages are no longer learned by children. These languages will die. Many others are endangered. Most of these have less than a few thousand users. Only strong cultural and religious ties keep languages such as Yiddish and Pennsylvania Dutch viable. How long they will continue to be secure is anyone's guess.

This century may see the eradication of most remaining languages. Sadly, it is doubtful that many of the 270 aboriginal languages of Australia—possibly some of the Earth's oldest languages—will survive. The one that gave us *koala* is already gone. Of the 154 Native American languages now in use, nearly 120 are each spoken by less than a thousand individuals. A few years ago, only three people spoke OroWin, an Amazonian language, and they were all in their sixties. Gullah, spoken by the descendents of African slaves on islands off the coast of South Carolina and Florida, may have 10,000 monolingual speakers. Note that some linguists consider Gullah to be a dialectal variant of African American English. More on dialects later.

The worldwide loss of languages is the result of government policy, dwindling indigenous populations, the movements of populations to cities, mass media, and lack of education of the young. The internet is also a culprit in the demise of some languages. The need to converse in one language is fostering increasing use of English.

Each language is a unique vehicle for thought. For example, in many Native American languages, the Great Spirit is not a noun as in European notions of god but a *verb*. As a speaker of English, can you even imagine *god* as a verb? It changes the whole concept of a supreme being and broadens our thoughts.

In the rain forest of northwestern Brazil, a language called Pirahã is so unique that it almost defies accepted notions of language. Spoken by approximately 350 people and reflecting their culture, Pirahã consists of only eight consonants and three vowels. Yet it has such a complex array of tones, stresses, and syllable lengths that speakers dispense with their sounds altogether and hum, sing, or whistle using relatively simple grammar by linguistic standards. Meaning depends on changes in pitch and tone.

When we lose a language, we lose an essential part of the human fabric with its own unique perspective. A culture and possibly thousands of years of communication

die with that language, the study of which might have unlocked secrets about universal language features, the origins of language, or the nature of thought. Within oral-only languages, the very nature of language itself is different. Words that have been passed on for generations acquire a sacredness, and speech is somehow connected to the Divine as it is in some indigenous languages.

The death of a language is more than an intellectual or academic curiosity. After a week's immersion in Seneca, Mohawk, Onondaga, and other Iroquois languages, one man concluded:

> These languages are the music that breathes life into our dances, the overflowing vessels that hold our culture and traditions. And most important, these languages are the conduits that carry our prayers to the Creator. . . . Our languages are central to who we are as a native people. (Coulson, 1999, p. 8A)

English is a Germanic variation of a much larger family of Indo-European languages as varied as Italian, Greek, Russian, Hindi, Urdu, Persian, and ancient Sanskrit. Although the Indo-European family is the largest family, as many as 30 other families may exist, many much smaller.

Languages can grow as their respective cultures change. English has proven particularly adaptive, changing slowly through the addition of new words. According to the *Oxford English Dictionary*, approximately 8,000 English words predate the 12th century, including *laugh* and *friend*. Other languages, such as Icelandic, have changed little in the past thousand years, possibly because of isolation.

Already the language with the largest number of words—approximately 700,000—English adds an estimated half-dozen words per day. While many of these are scientific terms, they also include words popular on college campuses, such as *photobomb* (someone you don't know mugging in your *selfie*), *binge-watch* (made possible by view on demand), and *crowdfunding* (online small contributions to finance a project). Some words have new meaning. For example, previously only Moses had *tablets*; now everybody does. These words tell us much about our modern world.

Although most languages can be transmitted by speech, speech is not an essential feature of language. Many languages are spoken and also written. Some older languages, such as Sanskrit, survive only in written form. To some extent, the means of transmission influence processing and learning.

Some people are surprised to learn that American Sign Language (ASL) is not a mirror of American English. Like Swahili ASL is a separate language with its own rules for symbol combinations. As in spoken languages, individually signed units are combined following linguistic rules. Approximately 50 sign languages are used worldwide, including one of the world's newest languages, Nicaraguan Sign Language, invented by children with deafness to fill a void in their education. On the other side of the Earth in Al-sayyid, a Bedouin village in the Negev desert of Israel, another sign language has arisen without the influence of any other spoken or signed languages to serve the needs of approximately 150 individuals with deafness who reside in the community (Boswell, 2006).

Following is the American Speech-Language-Hearing Association definition of *language* (Committee on Language, 1983. Used with permission.) The result of a committee decision, this definition has a little of everything, but it also is very thorough.

- Language is a complex and dynamic system of conventional symbols that is used in various modes for thought and communication.
- Language evolves within specific historical, social, and cultural contexts.

- Language, as rule-governed behavior, is described by at least five parameters—phonologic, morphologic, syntactic, semantic, and pragmatic.
- Language learning and use are determined by the intervention of biological, cognitive, psychosocial, and environmental factors.
- Effective use of language for communication requires a broad understanding of human interaction including such associated factors as nonverbal cues, motivation, and sociocultural roles.

Languages exist because users have agreed on the symbols to be used and the rules to be followed. This agreement is demonstrated through language usage. Thus, languages exist by virtue of social use. Just as users agree to follow the rules of a language system, they can agree to change the rules. For example, the *eth* found as an ending on English verbs (ask*eth*) in the King James Version of the Bible has disappeared from use. New words can be added to a language; others fall into disuse. Words such as *DVD* and *blog* were uncommon just a few years ago. Users of one language can borrow words from another.

English also borrowed heavily from other languages, while they have felt free to borrow in return. Here are a few English words taken from other languages:

- *Raccoon* (Powhatan, a Native American language)
- *Jaguar* (Tupi-Guarani languages of the Amazon)
- *Immediate* (French)
- *Democracy* (Greek)
- *Tycoon* (Japanese)
- *Sofa* (Arabic)
- *Piano* (Italian)
- *Husband* and *window* (Old Norse)

In the process of adoption, meanings and words are changed slightly to conform to linguistic and cultural differences. In the 20th century, English incorporated words such as *barrio* (Spanish), *jihad* (Arabic), *sushi* (Japanese), and *schlep* (Yiddish).

Even strong, vibrant, firmly entrenched languages struggle against the embrace of the internet and its accompanying English. Formal Spanish has given way to Cyber-Spanish with words such as *escapar* (escape) instead of *salir* and *un emilio* or *imail* (an e-mail) instead of *un correo electrónico*.

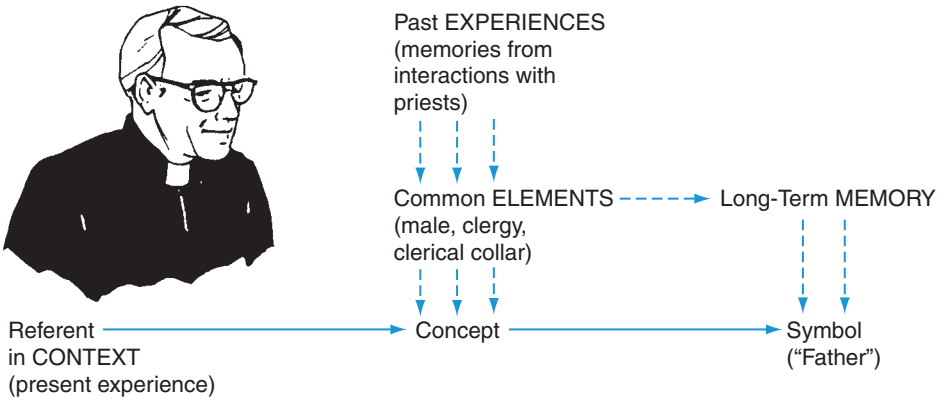
English has become the language of worldwide commerce and the internet. Possibly a billion people speak English as a second language, mostly in Asia. As they learn English, these speakers are making it their own, modifying it slightly with the addition of words from their languages and incorporating their own intonational and structural patterns. In the near future, it may be more appropriate to think of English as a family of similar languages.

Braj Kachru, a professor in India, hypothesizes that English can be as adaptable to local culture as a musical instrument is to music. More succinctly put, English no longer belongs to the English. In fact, the number of speakers in traditionally English-speaking countries is declining. The "Englishes" of the future may be hybrids or even new languages that may not be mutually understood by users speaking different Englishes.

The socially shared code of English or any language theoretically allows the listener and speaker or writer and reader of that language to exchange information. The shared

Figure 1.1 Symbol–Referent Relationship

The concept is formed from the common elements of past experiences. The common elements of these experiences form the core of the concept. When a referent is experienced, it is interpreted in terms of the concept and the appropriate symbol applied.



code is a device that enables each to represent an object, event, or relationship. Let's take a minute to see how this is done.

Close your eyes for a few seconds and concentrate on the word *ocean*. Then come back.

While your eyes were closed, you may have had a visual image of surf and sand. Words, such as *ocean*, represent concepts stored in our brains. The concept *ocean* was transmitted to you and decoded automatically. In a conversation, listener and speaker switch from encoding to decoding and back again without difficulty. Each user encodes and decodes according to his or her shared concept of a given object, event, or relationship; the actual object, event, or relationship does not need to be present.

Our concepts may differ. Let's assume that you encounter a priest. From past experience, you recognize his social role. As you pass, you draw on the appropriate symbol and encode, "Good morning, Father." This representational process is presented in Figure 1.1. The word may also suggest a very different meaning, depending on the experiences of each party. Let's assume for a moment that your biological father is an Episcopal minister. You see him on the street in clerical garb and offer the same greeting. A passerby, unaware of your relationship, will assume something very different from the meaning that you and your father share. Coding is a factor of the speaker's and listener's shared meanings, the linguistic skills of each, and the context in which the exchange takes place.

Individual linguistic units communicate little in isolation. Most of the meaning or information is contained in the way symbols are combined. For example, "Teacher Jim a is" seems a meaningless jumble of words. By shifting a few words, however, we can create "Jim is a teacher." Another modification could produce "Is Jim a teacher?"—a very different sentence. Language rules specify a system of relationships among the parts. The rules for these relationships give language order and allow users to predict which units or symbols will be used. In addition, the rules permit language to be used creatively. Symbols and rules governing their use help us to create utterances.

Language isn't merely as a set of static rules. It is a dynamic process of use and modification within the context of communication. Language is a tool for social use.

What is language and what is not? In minutes 4:05-11:50 of **Video Example 1.2: Steven Pinker: Linguistics as a Window to Understanding the Brain** Dr. Steven Pinker of Harvard University answers this question. **Source:** https://youtu.be/Q-B_ONJIEcE

Communication

Both speech and language are parts of a larger process called communication. Communication is the exchange of information and ideas, needs and desires, between two or more individuals.

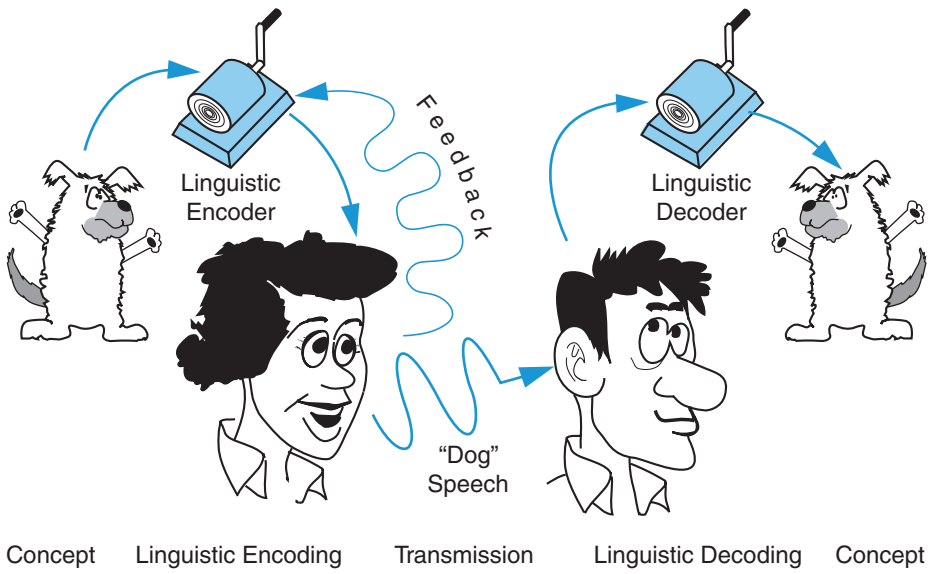
Human communication is a complex, systematic, collaborative, context-bound tool for social action. Complexity can be demonstrated by the multifaceted and multifunctional aspects of the process. In oral communication, these include all aspects of speech and language plus hearing and additional mental processes, such as memory and planning. This all occurs within cultural norms, situational variables, and social conventions of the individual participants. Although complex, communication is systematic not random. For most communicators, the process is reasonably easy.

The communication process is an active one that involves encoding, transmitting, and decoding the intended message. Figure 1.2 illustrates this process. It requires a sender and a receiver, and each must be alert to the informational needs of the other to ensure that messages are conveyed effectively and that intended meanings are preserved. For example, a speaker must identify a specific female, as in "Have you seen Catalina?" prior to using the pronoun *she*, as in "She was supposed to meet me." The probability of message distortion is very high, given the number of ways a message can be formed and the past experiences and perceptions of each participant. The degree to which a speaker is successful in communicating, measured by the appropriateness and effectiveness of the message, is called communicative competence. The competent communicator is able to conceive, formulate, modulate, and issue messages and to perceive the degree to which intended meanings are successfully conveyed.

As mentioned, communication is collaborative. Partners actively coordinate construction of the dialogue as they try to understand each other. For example, one participant might say, "Let's go to Jackie's," to which the other replies, "Where?" The first speaker's response is "You know, the Cajun restaurant I told you about." Jointly, the two participants try to understand and to be understood. Most of the time, we're successful.

This process occurs within a specific cultural context that influences interpretation of linguistic units and speaker behaviors. I once introduced myself to a young Korean

Figure 1.2 Process of Communication



boy as *Bob*, unaware that *bob* means *rice* in Korean and that being someone's rice is an idiom for being his servant. Imagine how thrilled—and misinformed—he was when I, his supposed servant, subsequently hoisted him upon my shoulders as his mother and I headed down the street. The context also varies depending on the physical setting, partners, and topics. All of these can change minute by minute based on what's said.

Finally, communication is a tool for social action. We accomplish things as we communicate. Let's eavesdrop on a conversation:

SPEAKER 1: Are you busy?

SPEAKER 2: No, not really.

SPEAKER 1: Well, if you could, please take a look at my presentation for class.

SPEAKER 2: Okay.

Speaker 1 used politeness to accomplish her goals. By prefacing her request with a question, she invited speaker 2 to respond in a positive way. That's why gran'ma told you that you could catch more flies with honey than with vinegar.

PARALINGUISTIC CUES Speech and language are only a portion of communication. Other components of communication that affect the message can be classified as paralinguistic, nonlinguistic, and metalinguistic. These relationships are illustrated in Figure 1.3.

Paralinguistic codes, including intonation, stress or emphasis, speed or rate of delivery, and pause or hesitation, are superimposed on speech to signal attitude or emotion. All components of the signal are integrated to produce the meaning. *Intonation* or the use of pitch is the most complex of all paralinguistic codes and is used to signal the mood of an utterance. For example, falling or rising pitch alone can signal the purpose of an utterance. For example, a rising pitch—signaled in the following by an arrow—can change a statement into a question.

You're coming, aren't you.↓ (Insistent statement)

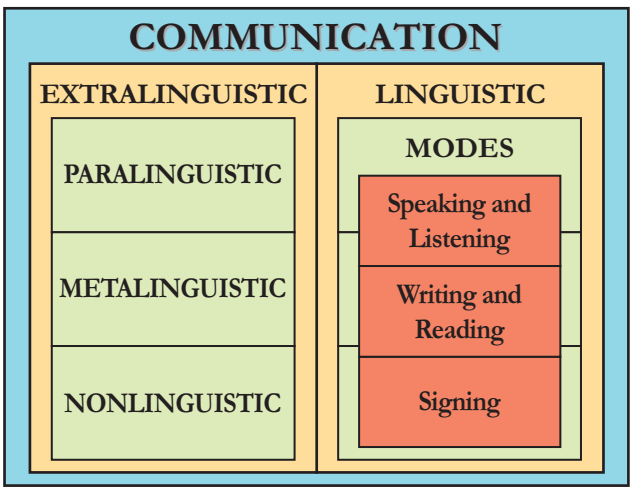
You're coming, aren't you?↑ (Question seeking agreement)

Application Exercise 1.1: The Development of Language Skills in Young Children

Figure 1.3 Components of Communication

Communication is accomplished through linguistic and paralinguistic codes and many means of transmission, such as speech, intonation, gestures, and body language.

SOURCE: Information from Hogan, Catts, & Little (2005); Sutherland & Gillon (2005).



Pitch can also signal emphasis, asides, emotions, importance of the information conveyed, and the role and status of the speaker.

Stress is also employed for emphasis. Each of us remembers hearing, "You **will** clean your room!" to which you may have responded, "I **did** clean my room!" The *will* and *did* are emphasized to convey each speaker's attitude.

Speaking rate varies with our state of excitement, familiarity with the content, and perceived comprehension of our listener. In general, we tend to talk faster if we are more excited, more familiar with the information being conveyed, or more assured that our listener understands our message.

Pauses may be used to emphasize a portion of the message or to replace the message. Even young children recognize that a short maternal pause after a child's request usually signals a negative reply. Remember asking, "Can Chris sleep over tonight?" A long silence meant that your plans were doomed.

In addition, pitch, rhythm, and pauses may be used to mark divisions between phrases and clauses. Combined with loudness and duration, pitch is used to give prominence to certain syllables and to new information. In text messages, we often signal spoken emphasis by writing

I. SAID. NO.

Paralinguistic mechanisms are called suprasegmental devices. Think of "super" or above segments or units of language. In other words, paralinguistics can change the form and meaning of a sentence by acting across these elements. As mentioned, a rising pitch can change a statement into a question without altering the arrangement of words. Similarly, "I did my homework" and "I **did** my homework" convey different emotions and meanings.

NONLINGUISTIC CUES Gestures, body posture, facial expression, eye contact, head and body movement, and physical distance or proxemics convey information without the use of language and are called nonlinguistic cues. The effectiveness of these devices varies with users and between users. We all know someone who seems to gesture too much or to stand too close while communicating. Some nonlinguistic messages, such as a wink, a grimace, a pout, or folded arms, can convey the entire message.

As with aspects of language, nonlinguistic cues vary with the culture. Perfectly acceptable gestures in one culture may be considered offensive in another. Table 1.1 presents a list of common American gestures considered rude, offensive, or insulting in other cultures. Luckily, a smile is one universal nonlinguistic signal for friendliness. People from other cultures often comment on how often Americans smile. That's good.

METALINGUISTIC SKILLS The ability to talk about language, analyze it, think about it, judge it, and see it as an entity separate from its content or context is termed metalinguistics. Metalinguistic skills help us judge the correctness or appropriateness of the language we produce and receive. Remember that crafting a communication is done jointly, and paralinguistics signal the status of the transmission or the success of communication. When you say "Huh?" you're signaling that you missed something. In addition, learning to read and write depends on metalinguistic awareness because the entire context, unlike in speech, is on the page, constructed from words, phrases, and sentences found there. For example, saying "I want that" may be easy to understand when accompanied by a point but would be meaningless in written form without being accompanied by a written explanation.

Table 1.1 Nonlinguistic Cues

Gesture	Other interpretations	Countries in which unacceptable
Thumbs-up		Australia, Nigeria, Islamic countries, such as Bangladesh
A-OK	Japan: *money*	Latin American countries
	France: zero, worthless	
Victory or peace sign		England (if palm toward body)
Hailing a waiter (one finger raised)	Germany: *two*	Japan
Beckoning curled finger		Yugoslavia, Malaysia, Indonesia, Australia
Tapping forehead to signify "smart"	Netherlands: *crazy*	
Stop		Greece, West Africa
Hands in the pockets		Belgium, Indonesia, France, Finland, Japan, Sweden
Strong handshake	Middle East: *aggression*	
Good-bye	Europe and Latin America: *no*	
Crossing legs and exposing sole of the foot		Southeast Asia
Nodding head for agreement	Greece, Yugoslavia, Turkey, Iran, Bengal: *No*	

Source: Information from Axtell, R. E. (1991). Gestures: The do's and taboos of body language around the world. Baltimore, MD: Wiley.

Let's be honest. Communicating effectively is truly tough. Language can be ambiguous, so each partner in a conversation must monitor the other partner's linguistic cues and the paralinguistic and nonlinguistic signals that accompany them (Sperber et al., 2010). Failure to process all this information can lead to miscommunication.

THE BEGINNINGS OF HUMAN COMMUNICATION Even though communication is complex, it's almost impossible not to communicate. If you turn away and try not to communicate, your behavior will communicate that information.

When and how did human communication diverge from other primate communication? It's difficult to say because speech doesn't leave any tangible evidence. Our best guess is that spoken language appeared around 50,000 to 100,000 years ago. The first "words" may have been imitations of animal sounds or may have accompanied emotion, such as crying, and actions, such as a grunt when attempting to move something heavy.

Although we can't answer the question more precisely, language itself may offer a place to begin an explanation. If we look back at our characterization of language, we said that language is a social tool. We can conclude that language is a means for achieving social ends based on shared understanding and purpose (Tomasello, 2008). Thus, human communication is fundamentally cooperative in nature. Herein may be our answer.

The cooperative nature of human communication and the cooperative structure of human social interaction and culture are closely related. Early forms of communication were most likely gestural in nature, including pointing and pantomiming (Tomasello, 2008). The cooperative nature of these gesture differs qualitatively from other primate communication, which is primarily requesting to fill immediate needs. In contrast, cooperative communication requires socio-cognitive skills of shared intentionality.

While chimpanzees, with whom we share a common ancestor, do have and understand individual intentionality, most do not have the skills of shared intentionality, such as joint goals and shared attention that are necessary for cooperative communication.

Early humans were probably driven to cooperate because of fear of hunger or the high risk of being eaten by predators (Bickerton, 2003). After all, we're not very formidable individually. Thus, human cooperative communication probably resulted from a biological adaptation for collaborative activities to ensure our survival.

Vocal communication or meaningful sound making probably emerged after conventionalized gestures. Most likely the earliest vocal accompaniments to gestures were emotional or added sound effects to some already meaningful gestures or other actions. Some vocalizations may have accompanied specific acts such as mourning or imitated animal sounds. At some point, the vocalizations took on meaning of their own. Although pointing works in context, our ancestors had to rely on some other signal to communicate about something that is not present. In addition, vocal communication freed the hands for other purposes (Goldin-Meadow, 2005).

When we compare a gorilla skull to a Neanderthal skull from approximately 60,000 years ago, one striking difference can be noted in the vocal tract of the early humanoid. The reconfigured vocal tract suggests that some consonant-like sounds were possible back then. More modern vocal tracts appear about 35,000 years ago. When compared to other primates, humans have more vertical teeth, more intricately muscled lips, a relatively smaller mouth, a greater closure of the oral cavity from the nasal, and a lower larynx or "voice box." All of these adaptations make speech as we know it possible. Most importantly, humans possess a large and highly specialized brain compared to their overall size.

It is the rules of language that enable humans to communicate precise messages. Sounds can be combined, recombined, broken down, and combined another way to convey different meanings. A dog's bark cannot be manipulated in this way and is a relatively fixed form.

? Self-Check 1.1

Grammar arose to express more complex relationships. This was especially important as communication moved from requesting to informing and information sharing (Tomasello, 2008).

Properties of Language

As we've seen, language is a social interactive tool that is both rule governed and generative, or creative. Let's explore these traits more.

Language Is a Social Tool

It does little good to discuss language outside the framework provided by communication. While language is not essential for communication, communication is certainly an essential and defining element of language. Without communication, language has no purpose.

As a code shared by users, language enables those same users to transmit ideas and desires to one another. In fact, language has but one purpose, which is to serve as the code for transmissions between people.

Overall, language reflects the collective thinking of its culture and, in turn, influences that thinking. In the United States, for example, certain words, such as *democracy*,

reflect cultural meanings and emotions and, in turn, influence our concepts of other forms of government. The ancient Greek notion of democracy was somewhat different and similarly influenced the Greeks' thinking.

At any given moment as we use it to communicate, language is influenced by what precedes it and influences what follows. The utterance "And how's my little girl feeling this morning?" only fits certain situations that define appropriate language use. It would not be wise to use this utterance when meeting the Queen of England for the first time. In turn, the sick child to whom this might be addressed has only limited options that she can use to respond. Responses such as, "Go directly to jail; do not pass Go" and "Mister Speaker, I yield the floor to the distinguished senator from West Virginia," while perfectly correct sentences, just don't make sense or fit the situation. These utterances don't continue the communication but rather cause it to break down.

To consider language without communication is to assume that language occurs in a vacuum. It is to remove the very *raison d'être* for language in the first place. Language is a social tool we use to communicate.

Language Is a Rule-Governed System

The arrangement of the symbols (words and sounds) of a language is not random. A language's systematic organization demonstrates the presence of underlying rules or patterns that occur repeatedly. These shared rule systems allow users of a language to create and comprehend messages.

Language includes not only the rules but also the process of rule usage and the resulting language product. For example, a sentence is made up of a noun plus a verb, but that rule tells us nothing about the process by which you select the noun and verb or the seemingly infinite number of possible combinations using these two categories.

A language user's underlying knowledge about the system of rules is called his or her linguistic competence. Even though you as a user can't state many of the rules, your performance demonstrates adherence to them. The linguist or language scientist observes human behavior in an attempt to determine those rules or operating principles.

If you have ever listened to an excited speaker or a heated argument, you know that speakers do not always observe the linguistic rules. In fact, much of what we, as mature speakers, say is ungrammatical. Imagine that you have just returned from the New Year's celebration at Times Square. You might say the following in a very rushed manner:

> Oh, wow, you should have . . . you wouldn't be-believe all the . . . never seen so many people. We were almost . . . ah, trampled. And when the ball came down . . . fell, all the . . . Talk about yelling . . . so much noise. We made a, the mistake of . . . can you imagine anything as dumb as . . . well, it was crazy to drive.

Like much of what we say, it's am ungrammatical jumble but still understandable because you know the rules of American English.

Linguistic knowledge in actual usage is called linguistic performance. A user's linguistic competence must be deduced from his or her linguistic performance, such as that of our New Year's reveler. You cannot measure linguistic competence directly without the speaker performing in some way, such as answering questions or making statements.

There are many reasons for the discrepancy between competence and performance during normal language use. Some constraints are long-term, such as ethnic background, socioeconomic status, and region of the country. These account for dialects and

regionalisms. We are all speakers of some dialect of American English. More on that later.

Even though much that is said is ungrammatical, native speakers have relatively little difficulty decoding messages. If a native speaker knows the words being used, he or she can apply the rules in order to understand almost any sentence encountered. In actual communication, comprehension is influenced by such things as the linguistic skill and intent of the speaker, the context, the listener's hearing ability and cognitive processing skill, the available shared meanings, and the linguistic complexity of the utterance to name a few.

A sentence such as "Chairs sourly young up swam" is ungrammatical. It violates the rules for English word order. Native speakers notice that the words do not fall into predictable patterns. When rearranged, the sentence reads "Young chairs swam sourly up." This is now grammatical in terms of word order but meaningless; it doesn't make sense. Other rules allow language users to separate sense from nonsense and to determine the underlying meaning. Likewise, a single sentence may have two meanings. For example, the sentence "The shooting of the hunters was terrible" can be taken two ways: either they shot poorly or someone shot them. Language users must know several sets of different types of rules to make sense of what they hear or read.

LEARNING THE RULES Children learn language rules slowly through decoding the language spoken by others and attempting to encode their own thoughts. The formal rules learned later in school are just the "finishing touches." For example, long before a child can define a noun or name one, a preschool child demonstrates by using words that he or she knows what a noun is.

On one family trip, we passed the time with a word game. My 5-year-old daughter was asked to provide a noun. Immediately, she inquired, "What's that?" In my best teacher persona, I patiently explained that a noun was a person, place, or thing. She replied, "Oh." After some prodding, she stated, "Then my word is 'thing.'" Despite her obviously inadequate understanding of the formal definition of a noun, my daughter had demonstrated for years in her everyday use that she knew how to use nouns.

Language Is Generative

Language is a generative system. Note that the word *generative* has the same root as *generate*, which means to produce, create (as in the word *Genesis*), or bring into existence. Thus, language is productive and creative. A knowledge of the rules permits speakers to generate meaningful utterances. From a finite number of words and word categories, such as nouns, and a finite set of rules, speakers can theoretically create an almost infinite number of sentences. This creativity probably occurs for several reasons:

- Words can refer to more than one entity.
- Entities can be called more than one name.
- Words can be combined in a variety of ways.

Think of all the possible sentences you could create by combining just the nouns and verbs you know. When this task is completed, you could modify each sentence by adding adverbs and adjectives, articles and prepositions, and by combining sentences or rearranging words to create other variations.

As mentioned, the possibilities for creating new sentences are virtually endless. Consider the following:

Large elephants danced gracefully beneath the streetlights.

Even though you have probably never seen this utterance before, you understand its meaning because you know the rules of English. Try to create your own novel utterance. The process will seem difficult, and yet you form novel utterances every day and are not consciously aware of using any effort. Interestingly, much of what you said today and every day is novel or newly created.

I don't mean to imply that sentences are never repeated. Polite social or ritualistic communication is often repetitious. How frequently have you said the following sentences?

How you doin'?

Thank you very much.

Can I, Mom, please?

See you soon.

These utterances aside, you create whatever sentences you desire whenever you want.

Children do not learn all possible word combinations. That would be virtually impossible given the average human lifespan. Instead, as children, you and I tested rules that we hypothesized based on the speech around us. As an adult, you know most of the rules, enabling you and other adults to understand and to create or *generate* an infinite variety of sentences. Preschoolers who, unlike adults, may not have deduced all the language rules will, nonetheless, create their own variation of spoken English. Even their immature language is generative.

Other Properties

Human language is also *reflexive*, meaning we can use language to reflect on language, its correctness and effectiveness, and its qualities. We referred to this aspect of language previously as *metalinguistics*. We believe other animals cannot reflect on their own communication. Without this ability, this book would be impossible to produce.

An additional property of language is *displacement*, or the ability to communicate beyond the immediate context. As far as we know, your dog's bark is not about something that he remembers of interest from last week. You, on the other hand, can discuss tomorrow, last week, or last year, or events in the dim past of history in which you were not a participant.

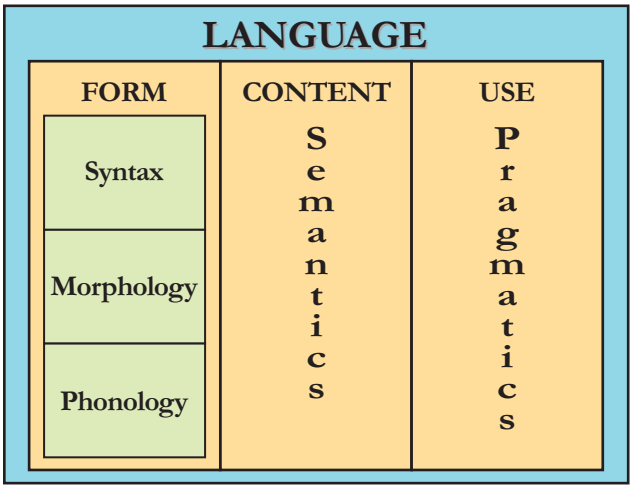
Although not always obvious from inside a language, the symbols used in that language are *arbitrary*, another property of language. There is, for example, nothing in the word *cat* that would suggest the animal to which it applies. Except for some words, such as *squash* and *cuckoo* that suggest a relationship between the sound and the action or thing to which a word refers, there is no naturally obvious relationship. The relationship is arbitrary.

? Self-Check 1.2

Components of Language

An exceedingly complex system, language can best be described by breaking it down into smaller components (Figure 1.4). We typically divide language into three major, although not necessarily equal, components: form, content, and use. Form is the shape or construction and includes syntax, morphology, and phonology, the components that connect sounds and symbols in order. Content encompasses meaning or semantics, and

Figure 1.4 Components of Language



use is termed pragmatics. These five components—syntax, morphology, phonology, semantics, and pragmatics—are the basic rule systems found in language.

As each of us uses language, we determine the intention of our partner or ourselves (*pragmatics*). We code ideas (*semantics*). We do this through the use of a symbol—a sound, a word, and so forth—to stand for an event, object, or relationship. To communicate these ideas to others, we use certain forms, which include the appropriate

- sound units and sequences (*phonology*),
- word order and relationships (*syntax*), and
- words and word beginnings (*un-, non-*) and endings (*-s, -ed*) (*morphology*).

Coming full circle, speakers use these components to achieve their communication intentions or ends, such as gaining information, greeting, or responding. Let's examine the five components of language in more detail.

Syntax

The form or structure of a sentence, called grammar, is governed by the rules of syntax. These rules specify word, phrase, and clause order; sentence organization; and the relationships among words, word classes, and other sentence elements. Syntax specifies which word combinations are acceptable, or grammatical, and which are not. For example, the syntax of English explains why "Maddi has thrown the ball" is a possible sentence, while "Maddi the ball has thrown" sounds awkward.

Sentences are organized according to their overall purpose; declaratives, for example, make statements, and interrogatives form questions. The main elements of a sentence are noun and verb phrases, each composed of various word classes (such as nouns, verbs, adjectives, and the like).

Each sentence must contain a *noun phrase* and a *verb phrase*. The mandatory features of noun and verb phrases are a noun and a verb, respectively. The short biblical verse "Jesus wept" is a perfectly acceptable English sentence: It contains both a noun phrase and a verb phrase. The following, however, is not a complete sentence, even though it is much longer:

The grandiose plan for the community's economic revival based on political cooperation of the inner city and the more affluent suburban areas

This example contains no verb and thus no verb phrase; therefore, it does not qualify as a sentence.

Within noun and verb phrases, certain word classes combine in predictable patterns. For example, articles such as *a*, *an*, and *the* appear before nouns, and adverbs such as *slowly* modify verbs. Some words may function in more than a single word class. For example, the word *dance* may be a noun or a verb. Yet there is no confusion between the following sentences:

The *dance* was attended by nearly all the students.

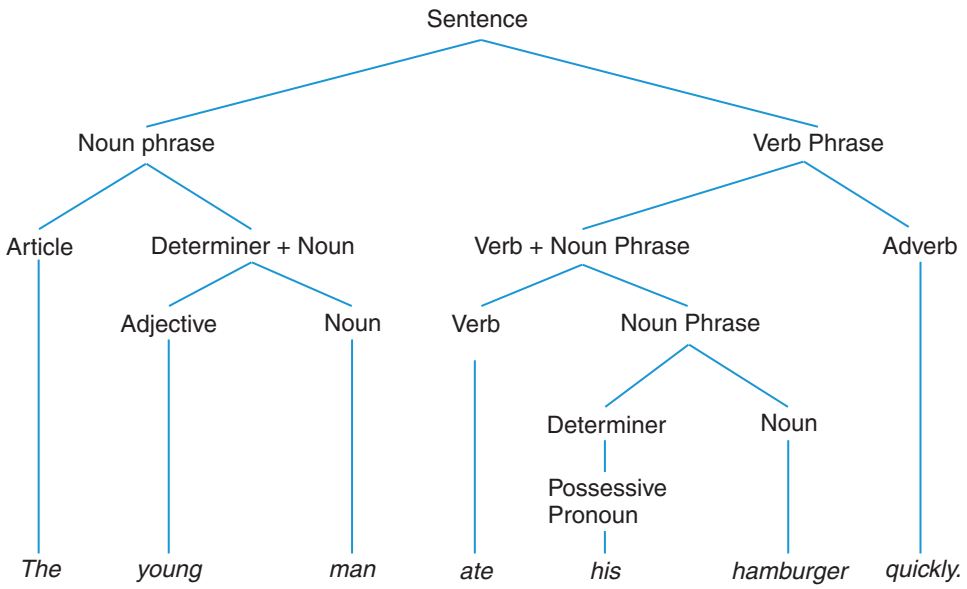
The children will *dance* to earn money for charity.

The linguistic context of each sentence—generally considered to be the language that precedes and follows a sentence—clarifies any confusion.

Syntax is conceptualized by some as a tree diagram of acceptable grammatical structures (Figure 1.5). Each noun phrase or verb phrase included in a sentence contains various word classes that can be changed as the content of the sentence changes. As long as the noun and verb remain, a sentence is possible. This hierarchical structure permits boundless elaboration within the confines of the syntactic rules, thus enabling us to claim that language is generative. Obviously, the tree diagram in Figure 1.5 has only limited use. Flexible use of language would require hundreds, if not thousands, of other possible diagrams. Unfortunately for you, children don't memorize tree diagrams. Instead, children in all languages hypothesize about regularities they note in the speech around them and use these grammatical patterns—Or rules, if you like—for constructing novel utterances, such as "Mommy eating cookie."

Figure 1.5 Hierarchical Sentence Structure

Within the noun and verb phrases, a number of different word classes can be arranged to form a variety of sentences. Many words could be used within each word class to form sentences such as "The young man ate his hamburger quickly" or "The mad racer drove his car recklessly."



As for adherence to language rules, spoken language is much more informal than written language and less constrained. In the 19th century, formal grammar guides were written, often prescribing for us peons the rules used by the upper classes. As a result, today we are saddled with the distinction in formal writing between *who* and *whom*, the incorrectness of using *since* to mean *because*, the inadmissibility of the split infinitive (*to finish quickly* is fine, but not *to quickly finish*), and the don't-end-a-sentence-with-a-preposition rule. Regarding the latter, British Prime Minister Winston Churchill famously quipped, "That is the type of arrant pedantry up with which I shall not put." Grammatically, he's correct, but boy, is it awkward.

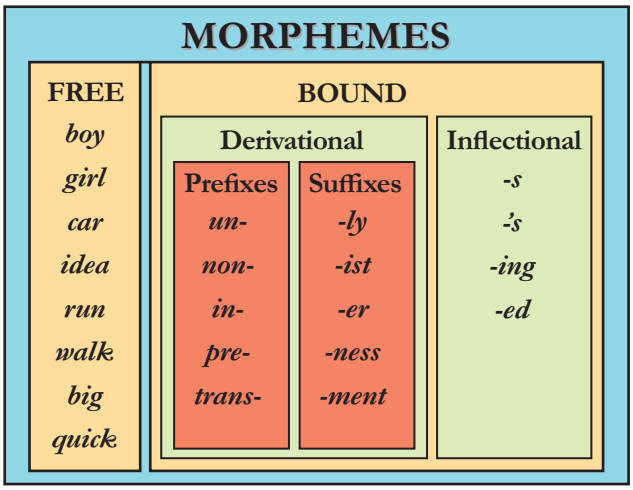
Languages can be placed along a continuum from those with relatively free word order and those with strict word-order rules. The Australian aboriginal language, Warlpiri, is relatively free. The same sentence may be expressed with several different word orders. Among word-order languages, rules fall into three classes based on the order of the subject, the verb, and the object. English is an example of the basic subject-verb-object (SVO) word order (*She eats cookies*). In contrast, Dutch, Korean, and Japanese have a basic verb-final form (SOV). The third type, represented by Irish, is verb-subject-object (VSO).

Morphology

Morphology is concerned with the internal organization of words. Words consist of one or more smaller units called *morphemes*. A morpheme is the smallest grammatical unit and is indivisible without violating the meaning or producing meaningless units. Therefore, *dog* is a single morpheme because *d* and *og* are meaningless alone. If we split the word into *do* and *g*, we have a similar situation because there is nothing in *dog* that includes the meaning of *do*, and *g* is meaningless alone. Most words in English consist of one or two morphemes. In contrast, Mohawk, found in northern New York and southern Quebec, constructs words of several morphemes strung together.

Morphemes are of two varieties, free and bound (Figure 1.6). Free morphemes are independent and complete within themselves. They form words or parts of words. Examples of free morphemes are *dog*, *big*, and *happy*. Bound morphemes are grammatical markers that cannot function independently. They must be attached to free morphemes or to other bound morphemes. Examples include *-s*, *-est*, *un-*, and *-ly*, meaning

Figure 1.6 Morpheme Classes and Examples



plural, most, negative, and manner, respectively. By combining these free and bound morphemes, we can create *dogs*, *biggest*, and *unhappily*. Bound morphemes are attached to nouns, verbs, and adjectives.

Bound morphemes can be either *derivational or inflectional* in nature. English derivational morphemes include both prefixes and suffixes. Prefixes (*un-*, *ir-*, *pre-*) precede the free morpheme and suffixes (*-ly*, *-er*, *-ity*) follow. Derivational morphemes change whole classes of words. For example, the suffix *-ly* may be added to an adjective (a word class or type) to create an adverb (another class or type), and *-ness* may be added to an adjective to create a noun as in *mad* and *madness*.

Inflectional morphemes are suffixes only. They change the state or increase the precision of the free morpheme. In English, inflectional morphemes include tense markers (such as *-ed*); plural markers; possessive markers (*-'s*, *-s'*); and the third person, singular present-tense verb ending *-s* as in "she walk*s*."

Languages differ in their relative dependence on syntax and morphology. In English, word order is used more than morphological additions to convey much of the meaning of a sentence. Hungarian, in contrast, has an extensive morphological system and considerable word-order variability. Sentences can be expressed in almost every possible order. Although Mandarin has no inflectional markings of any kind, language rules still permit considerable word order variation. To comprehend, listeners must rely on probability, context, intonation, and common sense.

Phonology

Phonology is the aspect of language concerned with the rules governing the structure, distribution, and sequencing of speech sounds and the shape of syllables. That's a lot.

Each language employs a variety of speech sounds called phonemes. A phoneme is the smallest linguistic unit of sound that can signal a difference in meaning. There is an obvious difference in the initial sounds in *pea* and *see* because each begins with a different phoneme. When transcribing phonemes we place them within slashes, such as /p/. This practice follows the International Phonetic Alphabet, which is discussed in more detail in Appendix A. The /d/ and /l/ phonemes are different enough to be considered as distinct phonemes. Each can signal a different meaning if applied to other sounds. For example, the meanings of *dog* and *log* are quite different, as are those of *dock* and *lock* and *pad* and *pal*. Phonemes are classified by their acoustic or sound properties, as well as by the way they are produced (how the airstream is modified) and their place of production (where along the vocal tract the modification occurs).

Actually, each phoneme isn't one sound but a family of very similar sounds. If you repeat the /p/ sound 10 times, each production will vary slightly for a number of physiological reasons. In addition, the /p/ sound in *pea* differs from that in *poor* or *soup* because each is influenced by the surrounding sounds. Even so, each /p/ sound is similar enough so as not to be confused with another phoneme. Thus, as mentioned previously, /p/ is a distinguishable English phoneme.

Allophone is the name we give to each of the individual members of these phoneme families of similar speech sounds, such as /p/. Each allophone differs slightly from another in the family but not enough to sound like a different phoneme.

English has approximately 43 phonemes, give or take a few for dialectal variations (see Appendix A). Actually, the human speech mechanism can make approximately 600 possible speech sounds. Say the word *butter* at normal speed, and note the middle "tt" sound. It's not really a /t/ or a /d/ but somewhere in between, with

elements of both. Except in rapid speech, most English-speakers won't recognize this difference. In contrast in Thai the language treats this sound as a separate phoneme. In English, the partial /t/ and partial /d/ sound is merely a convenient way to pronounce words quickly and is considered an allophone of either.

PHONOLOGICAL RULES Phonological rules govern the distribution and sequencing of phonemes within a language. Without the phonological rules, the distribution and sequencing of phonemes would be random and most likely meaningless. The organization of phonemes in the brain is not the same as speech, which is a mechanical act of producing speech sounds that conform to the phonological rules of a language.

Phonological rules for distribution describe which phonemes are permissible in various positions in words. For example, in English the *ng* sound, which is found at the end of *ring* and is considered to be a single phoneme (/ŋ/), never appears at the beginning of an English word. In contrast, rules for sequencing determine which sounds may appear in combinations. For example, the two-sound sequence /d + n/, may not appear back to back in the same syllable in English.

Sequencing rules also address the sound modifications made when two phonemes appear next to each other. For example, the *-ed* in *jogged*, pronounced as /d/, is different from the *-ed* in *walked*, which is pronounced as /t/. On other occasions, the distributional and sequencing rules both apply. The combination /nd/, for example, may not begin a word but may appear elsewhere, as in *hand*. The word *stew* is perfectly acceptable in English. *Snew* is not an English word but would be acceptable; *sdew*, however, could never be acceptable because in English words cannot begin with *sd*.

Semantics

Semantics is a system of rules governing the meaning or content of words and word combinations. With language form, we were concerned with rules for placement and order, now we're concerned with the meaning conveyed by the sound and word order.

The meanings of some words are mutually exclusive, such as *man* and *woman*; a human being is not typically both or neither in the binary of the American culture's notion of gender. In contrast, some Native American nations have a sense of two-spirit people who personify both genders. In contrast, other word meanings in a language overlap somewhat, such as *female*, *woman*, and *gal*. Not all females are women; some are girls. Many women would find it offensive to be called "gal."

It is useful at this point to make a distinction between *world knowledge*—what you've experienced—and *word knowledge*—what you know about the meanings of words. World knowledge, as you might expect, refers your autobiographical and experiential understanding and memory of particular events in your past. In contrast, word knowledge contains word and symbol definitions and is primarily verbal. Word knowledge forms your personal mental dictionary or thesaurus, which is called your *lexicon*.

As you might suspect, these two types of knowledge are related. Word knowledge is usually based, in part, on world knowledge. Most likely world knowledge does not consist of only one remembered event but is a generalized concept formed from several related events. In part, your concept of *dog* has been formed from several encounters with different types of dogs.

With more life experience, our knowledge becomes less dependent on each particular event. The resultant generalized concepts form the base for semantics. In the process, events become somewhat generalized, or separated from their original context. Thus,

the general word *dog* does not refer to any particular dog or type of dog or dog situation, such as a pound or a prestigious dog show.

As we mature further, concepts in world knowledge may even be formed without firsthand experience. For example, luckily, very few of us have experienced a tornado firsthand but we know what the word means or to what it refers. Mature language meanings reflect individual knowledge in addition to the cultural interpretation placed on this knowledge.

As we converse with other users of the same language, we sharpen our concepts and shape them to resemble more closely similar concepts in others. In this way, we come to share definitions with others, thus making clear, concise, comprehensible communication possible.

Concept development results in the words in your lexicon having a high amount of agreement with the shared concept of your language community. More elaborate word meanings will contain alternative choices to a word. For example, *canine* can be substituted easily for the concept *dog*, and *dog* can be used to refer to the dry, hot, dog days of summer; to a dog-eared book; or to being dog-tired. Finally, better lexical organization plus use of a word in your own speech results in easier retrieval of the word from your memory. In general, the more you know about a word and the more you use it to communicate, the easier it is to access.

Each word meaning contains two elements called semantic features and selection restrictions. Semantic features are aspects of the meaning that characterize a word. For example, the semantic features of *mother* include parent and female. One of these features is shared with *father*, the other with *woman*, but neither word contains both features. Selection restrictions, as the name suggests, prohibit certain word combinations because they are meaningless or redundant based on the words' semantic features. For example, *male mother* is for now meaningless because one word has the feature male and the other the feature female. Of course, males can do the mothering. In contrast, *female mother* is redundant because biological mothers are female, at least for the foreseeable future.

In addition to an objective denotative meaning, there is a connotative meaning containing subjective features or feelings. Thus, whereas the semantic knowledge of the features of *dog* may be similar, I may have encountered several large, vicious examples that you have not and may therefore be more fearful of dogs than you. In this way, our meanings differ slightly. Throughout life, language users acquire new features, delete old features, and reorganize the remainder to sharpen word meanings.

WORD RELATIONSHIPS Word meanings are only a portion of semantics and are not as important as the relationships between words. For example, as previously noted. the more shared features two words have, the more alike they are. Words with almost identical features—as you know—are called synonyms. Some examples are *abuse* and *misuse*, *dark* and *dim*, *heat* and *warmth*, and *talk* and *speak*.

Antonyms are words that differ in the opposite value for a single important feature. Examples include *up* and *down*, *big* and *little*, and *black* and *white*. *Big* and *little* both describe size but are opposite extremes.

Knowledge of semantic features provides a language user with a rich vocabulary of alternative words and meanings. To some extent, this knowledge is more important than the overall number of words in a language user's lexicon. Because words may have alternative meanings, a language user must rely on additional cues for interpretation of the meaning of a message.

Sentence meanings are greater than the sum of the individual words. A sentence represents not only the words that form that sentence but also the relationships among those words.

You're a mature language user. But I would bet you can't recall the specific form of any single sentences heard today, even though you probably have little difficulty recalling overall sentence meanings.

Pragmatics

When we use language to communicate, we make use of pragmatics. Pragmatics concentrates on the social use of language and on how you use language to achieve your communication goals. In other words, pragmatics is concerned with the way language is used to communicate rather than with either language form or with the meaning of what is said. For example, you might say to your roommate "I'm broke." That's a factual statement. It has a certain meaning. But you may have said it to get your roommate to loan you some cash or you may be using it as an excuse for not doing something. These are different goals and planning and using language to achieve those goals are part of pragmatics.

When, in pragmatics, we go beyond individual isolated sentences to look at how a set of utterances is used in a communication event, we are considering something called discourse (Ska, Duong, & Joanette, 2004; Ulatowska & Olness, 2004). Think of discourse as a language activity, such as having a conversation or telling a narrative. That's pragmatics too.

In short, pragmatics is everything you do as you use language to communicate. As such, pragmatics consists of the following:

- Communication intentions and the culturally appropriate ways of expressing them.
- Conversational principles or rules.
- Different types of discourse, such as narratives and jokes, and their construction.

Successful pragmatics requires more than knowing word order or meaning. To be successful, speakers and listeners must understand culturally acceptable language use. Thus, pragmatics adds the social aspect to communication.

Acceptable speech is addressed to both the appropriate person(s) and circumstance(s) and with all participants expressing appropriate intentions for those persons and circumstances. "May I have a donut, please" is valid language form and the meaning is clear, but it only makes sense when you are speaking to a person who can actually get you one and in a place where donuts are found.

Sometimes the very act of saying something makes it so:

I *apologize* for my behavior.

I *christen* this ship the U.S.S. *Schneider*.

I now *pronounce* you husband and wife.

Again, certain conditions must be met before each is valid. When someone apologizes but is overjoyed by another's discomfort or when a child or nondesignated adult pronounces a couple husband and wife, the act is invalidated.

PRAGMATIC RULES Pragmatic rules govern a number of conversational interactions in addition to expression of intent, such as the sequential organization and coherence of conversations, repair of errors, and communication roles. As mentioned, intentions

are what a speaker hopes to accomplish. When I say, "How do you spell *conqueror*?" my goal is to acquire information. When you respond, "Look it up online," your intention may be to deflect having to answer, maybe because you don't know either. Speakers have a wide variety of intentions and lots of ways to use their language to attain them.

Organization and coherence of conversations include such things as taking turns; opening, maintaining, and closing a conversation; establishing and maintaining a topic; and making relevant contributions to the conversation. Conversational construction reflects our purpose. Requesting to stay with a friend during the holidays requires that a conversation be crafted in a certain way. In another example, you most likely would not begin any conversation by saying "Bye."

Repair includes giving and receiving feedback and correcting conversational errors. The listener attempts to keep the speaker informed of the status of the communication by nodding or saying "Um-hm" of "Okay." If the listener doesn't understand or is confused, he or she might assume a quizzical expression or say, "Huh?"

We all have roles—loving daughter, blushing bride, upset mother—that we fill in conversations. Role skills include your ability to establish and maintain a role and switching linguistic codes for each role. In some conversations you are dominant, as with a small child, and in others you are not, as with your parents, and you adjust your language accordingly. My "Dr. Bob" language is different than my "Gran'pa Bob" language.

The roles in a conversation influence your choice of vocabulary and language form. For example, you might be very formal and precise in your role as student presenter at a professional conference but very informal and relaxed in the role of co-celebrator with other students at a party. I don't even need to ask in which one you'll use more slang.

In general, conversation is governed by the "cooperation principle" (Grice, 1975): Conversational participants cooperate with each other. The four maxims of the cooperation principle relate to quantity, quality, relation, and manner. Quantity is the informativeness of each participant's contribution: No participant should provide too little or too much information. In addition, the quality of each contribution should be governed by truthfulness and based on sufficient evidence. The relation principle states that a contribution should be relevant to the topic of conversation. Finally, each participant should be reasonably direct in manner and avoid vagueness, ambiguity, and wordiness.

As with the other components of language, pragmatics has rules. Three general categories of pragmatic rules concern

1. Selection of the appropriate linguistic form,
2. Use of language forms consistent with assumed roles, and
3. Use of ritualized forms ("Hi, how you doing?").

Selection of form between "Gimme a cookie" and "May I have one, please" is influenced by contextual variables and the speaker's intention. One choice may work with a school friend, whereas the other works best with the teacher. Listener characteristics that influence speaker behaviors include gender, age, race, style, dialect, social status, and role.

In general, speech may vary along a continuum from *direct* to *indirect*, reflected in the form an utterance takes. "Answer the phone" is a direct order or request to perform that act. In contrast, an indirect syntactic form such as "Could you answer the phone?" is a more polite way of requesting. As a mature language user, you know that the

Video Example 1.3: Mark Pagel: How Language Transformed Humanity contains an intriguing theory about why humans evolved our complex system of language. Pagel suggests that language is a piece of "social technology" that allowed early human tribes to access a powerful new tool: cooperation. **Source:** https://youtu.be/ImQrUjlyHUg

expected outcome is for you to answer the phone, not to answer the question in the second one with "yes."

Speech may also be *literal*, *nonliteral*, or both. In literal speech, the speaker means what she or he says. After a 10-mile hike, you might exclaim, "My feet really hurt," and no doubt they do. In contrast, nonliteral speech does not mean what the speaker has said. Upon discovering that transportation home has not arrived, the same tired hiker might state sarcastically, "Just what I need, more walking." Both literal and nonliteral meanings might be heard in the same comment of a mother enters her child's messy bedroom: "Mommy really likes it when kids pick up their room." She does like it, but she's also being sarcastic.

Finally, the wheels of social interaction are greased by good pragmatic use of ritualized sequences, such as "Hi, how are you?" and "Wha's up?" These predictable forms ease social interactions and individual participation. We can all recall an occasion when we felt close to death and yet responded, "I'm fine! How are you?"—a response that has become ritualized in casual greetings.

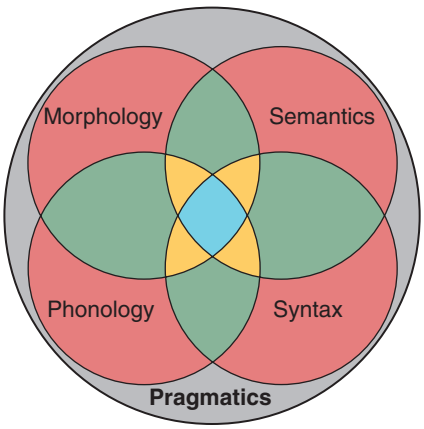
Relationship of Language Components

The language components we just discussed may be artificial, merely an analytical device for linguists and language scientists to use in discussing language. For example, some linguists emphasize the intimate relationship between semantics and syntax while others stress the relative structural independence of each.

We'll use these components of language to help us discuss development. Syntax, semantic and the like do provide a convenient framework for this discussion. It may be helpful to think of the relationship between the five language components as presented in Figure 1.7, in which pragmatics is the organizing principle of language. In other words, language is heavily influenced by context. The context, both situational, defined in what's happening, and linguistic, defined as what is said, determines the language user's communication options.

We might also add that a need to communicate exists prior to the actual selection of what to say or the content and how to construct it or the form. It is only when the child

Figure 1.7 Model of Language



Functionalist Model

Pragmatics is the overall organizing aspect of language.

desires a cookie and is in an appropriate context to receive one that he or she employs the rules of syntax, morphology, phonology, and semantics in order to form the request "Can I have a cookie, please?" Thus, pragmatics to some extent determines the others.

Wow, that was a lot, but we now have the basic confines in which we'll explore language development. Obviously, all these components of language are linked in some way. For example, the syntactic structure ("Yesterday I . . .") may require the morphological marker for past tense (*-ed*), which, in turn, changes phonetically to (/t/) to accommodate the affected word (*walk*). In development, components may also influence one another in that changes in one may modify development in another.

We've pulled language apart to look at its components, but of course, we don't learn them separately. Even with all that, children learn language quickly. In **Video Example 1.4: Language Sample 5** notice how the pre-schooler uses all the components of language to communicate.

? Self-Check 1.3

Dialects

We can't introduce language without mentioning dialects, something we all use. If you're a native speaker, your dialect may reflect where you live in the U.S. In addition, the United States is becoming an increasingly pluralistic society in which cultural and ethno-racial groups contribute to the whole but retain their essential character. One characteristic of these groups may be dialect.

A Changing Demographic

It is conservatively projected that the population of people of color will increase in the United States to 63 million by 2030. At the same time, the white, non-Latino population will increase at a slower rate and will thus become a smaller segment of the entire U.S. population. If current trends continue, white non-Latinos will be the largest *minority* by the year 2050.

At present, in the United States approximately one in four Americans identifies as other than white non-Hispanic. In the states of California, New Mexico, Hawaii, and Texas and in a score of cities and several counties, people of color represent more than 50% of the population. This situation reflects traditional demographics and a population shift that is the result of recent immigration, internal migration, and natural increase.

Within the last twenty years, 80% of the documented immigrants to the United States have come from Asia and Latin America. Approximately 40% of all recent documented immigrants are Asian. As a result, there are more than 12.5 million Asians and Asian Americans residing in the United States. Although this number represents only about 4% of the total U.S. population, it does not indicate the impact of Asians and Asian Americans on the country. Asians and Asian Americans tend to settle in coastal states, especially in the West, where they form large segments of the population. In addition, Asians and Asian Americans represent the fastest-growing segment of the U.S. population. Approximately three-fourths of these immigrants come from the five countries of Vietnam, the Philippines, Korea, China, and India. These individuals speak several languages and dialects of those languages. In turn, their heritage language may influence the dialect of American English they speak.

There are approximately 52 million Latinos in the United States. These include recent immigrants as well as U.S. citizens with Spanish surnames who may identify with Latino culture to a lesser degree. Approximately 40% of all recent documented immigrants are Latino. These immigrants come primarily from Mexico and Central America, Cuba, and South America and speak various dialects of Spanish. Many U.S. citizens from Puerto Rico also move to the continental United States. Most of the recent increase in the numbers of Latinos is due to increased births, not immigration.

In addition, there are approximately 80,000 documented black immigrants per year from the Caribbean, South and Central America, and Africa. This group represents slightly less than 1% of the U.S. population. This minority represents a number of languages, as is evident from the many geographic areas of origin.

The exact number of undocumented immigrants is unknown. Estimates average around 11 million. As with other groups, the languages of these immigrants influence the type of English they speak, representing other dialectal variations.

The largest internal migration is and has been that of African Americans, who number 35 million, or 12% of the U.S. population. Reversing the trend of the early to mid-20th century, African Americans began returning to the South in the early 1970s. Many of these individuals speak regional and/or ethno-racial dialects, such as African American English.

To a smaller extent, Native Americans, totaling 2 million or 0.7% of the U.S. population, have also experienced internal migration. At present, just over 20% of Native Americans live in Native American Homelands and Off-Reservation Trust Lands, compared to 90% in 1940. Their speech may reflect their heritage language or the specific dialect of American English they learned.

Currently, the 1.2 million Native Americans who are affiliated with a Native American community are divided among approximately 450 nations varying in size from the Cherokee Nation of over 300,000 to groups of just a few individuals. In addition to representing a variety of cultures, Native Americans speak over 200 different languages. Some 78% of Native Americans live in urban areas.

Birthrates differ across groups and also contribute to the changing demographics of the U.S. population. The majority white birthrate is 1.8, inadequate to maintain the relative proportion of whites in the United States. Birthrates for other populations are higher, for example, 2.1 for African Americans, 2.4 for Hispanic Americans, and 1.8 for Asian Americans (Pew Research Center, 2018).

Languages are especially changeable "around the edges," where speakers interact with speakers of other languages. For example, in many bilingual communities, speakers develop new varieties of communication incorporating both languages, and these varieties function as the basic vernacular, or everyday speech, of the community.

Bilingualism

The prevalence of bilingualism reflects the cultural mixing within a nation. In an isolated country, such as Iceland, the rather homogeneous nature of the culture is reflected in the scarcity of bilingualism. In the United States, approximately 20% of the population is bilingual, mostly speaking Spanish and English. Other countries may have large bilingual populations because of a large, influential neighbor with a different language, because the official language differs from the indigenous one(s), or because of a large immigrant population. In the United States, dual-language children are usually treated as different because the majority culture is monolingual. Worldwide, however, dual or multilingual children are at least as numerous as monolingual ones.

True balanced bilingualism, or equal proficiency in two languages, is rare. Nonbalanced bilingualism, in which an individual has obtained a higher level of proficiency in one of the languages, is more common. The language in which the individual is more proficient may not be the heritage language, which can recede if devalued or used infrequently.

It is also possible for a person to be semiproficient in both languages. This situation may occur for any number of reasons explained later in the chapter.

Decreased proficiency may reflect mixed input. Children who hear "Spanglish" (Spanish + English) in south Florida and in the southwestern United States or "Franglais" (French + English) in parts of Quebec province or upper New England can be expected to have more mixing in their own language. Examples of Spanglish among Miami adolescents include *chileado* (chilling out), *coolismo* (ultracool or way cool), *eskipeando* (skipping class), *friquado* (freak out), and *¡Qué wow!* More detrimental to the learning of either language is the mixing of syntax as in *¿Cómo puedo ayudarlo?* literally *How can I help you?*, following English word order—in place of the Spanish *¿Qué desea?*

In the United States, speakers of English are in a privileged position because English is widely used and valued, and has institutional support; therefore, it has attained a higher status. Speakers of English form a majority ethnolinguistic community. On the other hand, speakers of Spanish or Tagalog, a Filipino language, each represent a minority ethnolinguistic community whose language is given less support, reflecting its less valued status. These relative status differentials differ across communities. For example, in Miami's Little Havana, Spanish has a relatively higher status than it enjoys in other parts of the southern United States, yet in much of the United States, Spanish enjoys relatively higher minority status than Urdu, a Pakistani language, which has fewer speakers. In a second example, Canada is officially a bilingual country of two majority languages, although English has relatively higher status in most parts of the country. In Quebec, however, the relative differential is reversed.

There is a not-so-subtle prejudice against other languages in the general U.S. culture, and American English speakers may respond to these languages stereotypically. Unfortunately, recognition of this prejudice can even be seen in the speech of bilingual adults. For example, when talking with a Spanish-speaking Anglo, Latino adults tend to Americanize Spanish words, but they do not do so with a Latino audience.

BananaStock/Getty Images

Bilingual children who learn both home languages simultaneously are able to become proficient in both languages by preschool age but then may shift dominance, sometimes losing the ability to be bilingual by the teen or adult years.

Dialectal Differences

It's important to keep in mind before we begin this discussion that like languages, dialects are not monolithic. In our short discussion of American English dialects we are of necessity limited to be a homogenized version of each dialect (Wolfram, 2007). Variations and exceptions do exist. For example, Gullah/Geechee is considered by some linguists to be a variant of African American English (AAE) spoken along a corridor spanning traditionally African American communities along the coast from Florida to North Carolina. Other linguists consider Gullah/Geechee, as mentioned earlier in this chapter, to be a different language. African American children from the Gullah/Geechee heritage may use unique language forms and differing rates of use of shared forms from children speaking a more mainstream AAE dialect (Berry & Oetting, 2017).

A child born and raised in south Boston will not sound like a child from Charleston, South Carolina. In turn, a poor child and a wealthy preparatory school child from Charleston will not speak in the same way. These differences are called *dialectal differences*. In general, the language of these children and their families reflects the environmental influences of the language spoken around them. No child learns dialect-free English. Neither did you.

We cannot adequately discuss American English without considering dialectal variations, such as African American English or Middle Atlantic American English. To some extent languages such as English are theoretical entities. The view of a monolithic, unchanging, immutable language does not fit reality. As mentioned, languages have variety.

Not all speakers of a language use the same language rules. Variations that characterize the language of a particular group are collectively called a dialect. Each of us is a dialectal speaker.

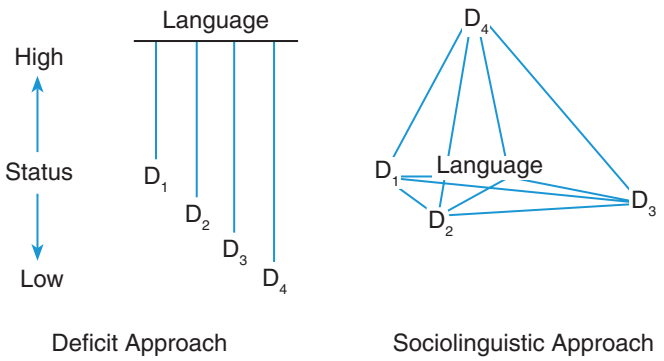
A dialect is a language-rule system used by an identifiable group of people that varies in some way from an ideal language standard. Dialects usually differ in the frequency of use of certain structures rather than in the presence or absence of these structures. The ideal standard is rarely used except in formal writing, and the concept of a standard spoken language is more myth than reality. Because each dialect shares a common set of grammatical rules with the standard language, dialects of a language are theoretically mutually intelligible to all speakers of that language.

No dialect is better than any other, nor should a dialect be considered a deviant or inferior form of a language. To devalue a dialect or to presume that one dialect is better ultimately devalues individuals and cultures. Each dialect is a system of rules that should be viewed within its social context. A dialect is adequate to meet the demands of the speech community in which it is found. Thus, it's appropriate for its users. Like languages, dialects evolve over time to meet the needs of the communities in which they are used.

Despite the validity of all dialects, society places relative values on each one. The standard, mainstream, or a majority dialect becomes the "official" criterion. Mainstream speakers of the language determine what is acceptable, often assuming that their own dialect is the most appropriate. In a stratified society, such as that of the United States, some dialects are accorded higher status than others. But, in fact, the relative value of a dialect is not intrinsic; it represents only the listener's bias. Dialects are merely differences within a language.

The two ways of classifying dialects—the older deficit approach and the more modern sociolinguistic approach—are illustrated in Figure 1.8. In the diagram, dialects that are closer to the standard in the frequency of rule use are separated by less distance. Under the deficit approach, each dialect has a different relative status. Those closer to

Figure 1.8 The Relationship of the Idealized Standard Language and Its Dialects



the idealized or mainstream standard are considered to be better. Status is determined relative to the standard. The sociolinguistic approach views each dialect as an equally valid rule system. Each dialect is related to the others and to the ideal standard. No value is placed on a dialect.

Dialectal variations that might be considered to represent Nonmainstream American English (NMAE) include Appalachian American English, Creole English, Latino English, and African American English. Designation as NMAE represents degree of difference, not qualitative judgments of better or worse.

Related Factors

Several factors are related to dialectal differences. These include geography, socioeconomic status, race and ethnicity, situation or context, peer-group influences, and first- or second-language learning. The United States was established by settlers who spoke many different languages and several dialects of British English. Members of various ethnic groups also chose to settle in specific geographic areas. Other individuals remained isolated by choice, by force, or by natural boundaries. In an age of less mobility, before there were national media, American English was free to evolve in several separate ways.

A New York City dialect is very different from an Ozark dialect, yet both are close enough to Mainstream American English (MAE) to be identified as variants. As children mature, they learn the dialect of their home region. Each region has words and grammatical structures that differ slightly. What are *sack* and *pop* to the Midwestern American are *bag* and *soda* to the Middle Atlantic speaker. The Italian sandwich changes to *submarine, torpedo, hero, wedge, hoagie*, and *po'boy* as it moves about the United States. Within each region there is no confusion. But order a *milkshake* in Massachusetts and that's what you get—flavored milk that's been shaken. If you want ice cream in it, you need to ask for a *frappe*.

Some regions of the United States seem to be more prone to word invention or to novel use than others. In the southern Appalachian region, for example, you might encounter the following:

A man might raise enough corn to *bread* his family over the winter.

To do something without considering the consequences is to do it *unthoughtedly*.

Something totally destroyed would be torn to *flinderation*.

Long-lasting things are *lasty*.

Note that the form of each word follows generally accepted morphological marking rules, such as the *-ly* in *unthoughtedly*.

As a child, my daughter was given a vivid example of regional dialectal differences while conversing with a child from the southern United States. Although she was white, the child's older half brother was the product of a racially mixed marriage. Trying to figure out this situation, my daughter ventured the opinion, "Your brother is really *tan*." She was corrected quickly with "No he ain't; he's *eleven*."

A second factor in dialectal differences is socioeconomic status (SES). This factor relates to social class, educational and occupational level, home environment, and family interactional styles, including maternal teaching and child-rearing patterns. In general, people from lower-SES households use more restricted linguistic systems. Their word definitions often relate to one particular aspect of the underlying concept. Those from higher SES backgrounds generally have more education and are more mobile, which generally contribute to the use of a dialect closer to the mainstream. For example, among African American children, boys from lower-income homes are more likely than middle-class African American boys or girls to use features of the African American English dialect (AAE; Washington & Craig, 1998). Many speakers from lower-SES backgrounds—including me—change the final "ing" /ŋ/ to /n/, producing *workin'* instead of *working*.

Racial and ethnic differences are a third factor that contributes to dialect development. By choice or as a result of de facto segregation, racial and ethnic minorities can become isolated, and a particular dialectal variation may evolve. It has been argued that the distinctive Brooklyn dialect reflects the strong influence of Irish on American English. Yiddish influences have also affected the New York City dialect. The largest racial group in the United States with a characteristic dialect is African American. African American English is spoken by African Americans from lower-SES backgrounds primarily in large industrial areas and in the rural South. Not all African Americans speak African American English.

Fourth, dialect is influenced by situational and contextual factors. All speakers alter their language in response to situational variables. These situationally influenced language variations are called registers. The selection of a register depends on the speaker's perception of the situation and the participants, attitude toward or knowledge of the topic, and intention or purpose. A casual, informal, or intimate register is called a vernacular variation. Informal American English uses more contractions (*isn't, can't*) and particles (get *up*, put *on*) than formal American English. The variation from formal to informal styles or the reverse is called style shifting and is practiced by all speakers. Regardless of the speaker, style shifts seem to be in the same direction for similar situations. For example, in formal reading there is greater use of *-ing* (/ŋ/), while informal conversation is characterized by an increase in the use of *-in* (/n/). Most shifts are made unconsciously. Thus, we might read aloud "I am writing" but say in conversation "I'm writin'."

A fifth influence on language is peer group. In the United States, groups such as teens or lesbians and gay men have their own lexicons and idioms that may not be understood by the society as a whole. Peer influence is particularly important during adolescence as you know. Generally, the adolescent dialect is used only with peers. Language scientists have labeled two strains of the current teen dialect as "mallspeak" and "texting." Minimalist and repetitive, the rather imprecise mallspeak is a spoken dialect that overuses words such as *like, y'know*, and *whatever*. In contrast, text messaging is a minimalist "code" that you use on your smartphone. On chat lines and when

instant messaging, communicators use a shorthand including letters for words, such as "u" for *you* and "r" for *are*; numbers for words, such as "4" for *for*; phonetic spelling, such as "sum" for *some*; and combinations, such as "sum1" for *someone* or "b4" for *before*. Whole phrases may be reduced, such as *by the way* to "BTW." As adults have adopted this practice, teens have tended to use both these shorthand and emojis less.

Finally, a dialect may reflect the primacy of another language. Speakers with a different native language often retain vestiges of that language. They typically code switch from one language code to another. The speaker's age and education and the social situation influence the efficacy of code switching.

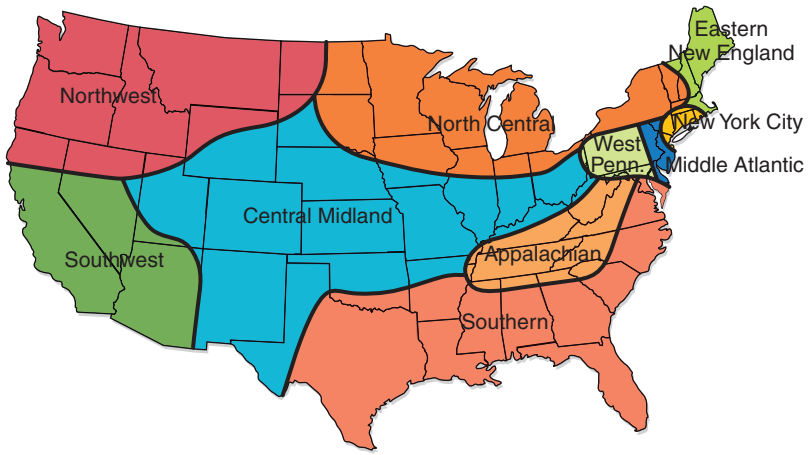
American English Dialects

Standard American English (SAE) is an idealized version of American English that occurs rarely in conversation. It is the form of American English that is used in textbooks and on network newscasts. As mentioned, all of us speak a dialect of English or another language. When making comparisons, it may be more appropriate to speak of Mainstream American English (MAE).

There are at least 10 regional dialects in the United States (presented in Figure 1.9): Eastern New England, New York City, Western Pennsylvania, Middle Atlantic, Appalachian, Southern, Central Midland, North Central, Southwest, and Northwest. In general, the variations are greatest on the East Coast and decrease to the West. Each geographic region has a dialect marked by distinct sound patterns, words and idioms, and syntactic and prosodic systems. Regional dialects are not monolithic. For example, within Southern American English, racial differences exist. This is further complicated by the use of Cajun/Creole American English in Louisiana (Oetting & Wimberly Garrity, 2006).

The major racial and ethnic dialects in the United States are African American English, Spanish-influenced or Latino English, and Asian English. In part, these dialects are influenced by geographic region and by socioeconomic factors. Spanish influences also differ depending on the country or area of origin. Colombian Spanish is very different from Puerto Rican Spanish. Asian English differs with the country of origin and the heritage language.

Figure 1.9 Major American Geographic Dialects



AFRICAN AMERICAN ENGLISH For the purposes of description, we shall consider African American English (AAE) to be the relatively uniform dialect used by African Americans in the inner cities of most large urban areas and in the rural South, when speaking casually. In short, it is the linguistic system used by African American people from low-SES backgrounds within their speech community. As such, AAE shares many of the characteristics of Southern and other lower-SES dialects. Obviously, not all African Americans speak the dialect. Even among speakers of AAE, a difference exists in the quantity of dialectal features used by different individuals. Conversely, white speakers who live or work with speakers of AAE may use some of its features. It is also important to remember that there are variations of AAE that its speakers use for certain situations. As with other dialects, there is a formal–informal continuum. Individual differences may be related to age, geographic location, income, occupation, and education.

As with other dialects, AAE is a systematic language-rule system, not a deviant or improper form of English. Its linguistic variations from Mainstream American English (MAE) are not errors. The linguistic differences between AAE and MAE are minimal. Most of the grammatical rules and underlying concepts are similar. Variations are the result of AAE's different and equally complex rule system. Although it shares features with other dialects, AAE has some features—such as the use of *be* in the habitual sense, as in "She *be* working there since 1985," and the triple negative, as in "Nobody don't got none"—that are primarily characteristic of AAE. Much of the sense of this dialect can also be found in its intonational patterns, speaking rate, and distinctive lexicon.

The major characteristics of AAE are listed in Appendix B. It is unlikely that any given individual who speaks AAE will exhibit all of these characteristics. The frequency of appearance of each feature will change with situational variations and over time.

LATINO ENGLISH Within the United States, the largest ethnic population is Hispanic. Not all people with Spanish surnames speak Spanish; some do exclusively; and still others are bilingual, speaking both Spanish and English. The form of English spoken depends on the amount and type of Spanish spoken and the location within the United States. The two largest Hispanic groups in the United States are of Puerto Rican–Caribbean and Mexican–Central American origin. Although both groups speak Spanish, their Spanish dialectal differences influence their comprehension and production of American English. The dialect of American English spoken in the surrounding community also has an effect. For ease of discussion, we will refer to these dialects collectively as *Latino English* (LE). Appendix B summarizes the major differences found between LE and MAE.

ASIAN ENGLISH Although we shall use the term *Asian English* (AE) throughout this text, no such entity actually exists. It is merely a term that enables us to discuss the various dialects of Asian Americans as a group.

The most widely used languages in East Asia are Mandarin Chinese, Cantonese Chinese, Filipino, Japanese, Khmer, Korean, Laotian, and Vietnamese. Of these, Mandarin Chinese has had the most pervasive influence on the evolution of the others. Indian and colonial European cultures, as well as others, have also influenced these languages. Each language has various dialects and features that distinguish it from the others. Thus, in reality there is no Asian English as a cohesive unit.

Nonetheless, the English of Asian language speakers has certain characteristics in common. These are also listed in Appendix B. The omission of final consonants, for example, is prevalent in AE. In contrast to English, most Asian languages, with the exception of Korean, have vowel-final syllables, called open syllables. Thus, Tokyo is an English representation of *To-Kyo*, or consonant-vowel syllables.

? Self-Check 1.4

Conclusion

LANGUAGE IS A SOCIAL TOOL consisting of a very complex system of symbols and rules for using those symbols. Native speakers of a language must be knowledgeable about the symbols employed and the acceptable usage rules, including concept, word, morpheme, and phoneme combinations.

Humans may be the only animals with a productive communication system that gives them the ability to represent reality symbolically without dependence on the immediate context for support. Although animals clearly communicate at some level, this communication is limited in topic and scope. For example, bees have an elaborate system of movements for conveying information, but it is extremely iconic (it looks like what it conveys) and unitopical. The topic seems to always be where to find nectar. Whether higher mammals, such as chimpanzees and other primates, are capable of complex symbolic communication will be discussed in the next chapter. In any case, it is only after intensive, long-term training that these animals learn what the human infant acquires in a few short months with little or no training.

Dialectal differences can pose special problems for a language-learning child, especially when the child enters school. Yet children who speak with significantly different dialects of American English seem to understand MAE. These young children, if motivated, follow a developmental sequence and learn a second language or dialect relatively easily. They already have a language-rule system that enables them to understand other dialects and learn other languages. Although different from MAE, other dialectal systems are not deviant. The U.S. district court for eastern Michigan, in a ruling known as the *Ann Arbor decision* (Joiner, 1979), determined that AAE is a rule-governed linguistic system. Furthermore, educators must develop sensitive methods for teaching MAE to dialectal speakers so they have the same educational and employment opportunities.

Hopefully, this introductory chapter has given you an appreciation for the complexity of the topic we'll be discussing. Imagine the enormous task you faced as a newborn with the entirety of language acquisition before you. In the following chapters, I'll try to explain as clearly as I can how you did it. Along the way, you'll gain the knowledge to become an observant parent, guiding teacher, or competent speech-language pathologist.

Discussion

WELL, I DID WARN YOU! Yes, you're right; this is complicated and it can be confusing. It's good to reflect on what we've read at the end of each chapter and to ask ourselves, "So what?"

The highlights in the chapter are the distinctions among speech, language, and communication. Frequently. speech-language pathologists (SLPs) in schools are referred to as the "speech teacher" despite the fact that in school caseloads, the largest percentage of cases are language impairments. If you told someone that you worked with language impairments, not speech, and he or she replied, "Aren't they the same thing?" how would you respond? Think about it. You have the ammunition from this chapter.

Other important aspects of this chapter include the characteristics of language. It's a social tool that's rule based, and those rules enable it to be used in a generative fashion. Language can also be characterized by its five areas: syntax, morphology, phonology, semantics, and pragmatics. Of these, pragmatics seems to be the organizing area because context determines the other four. All areas are interdependent, and changes in one area, either because of development or the dynamics of language use, will result in changes in the others.

This last item—the interdependence of the five areas of language—has important implications for development and also for intervention. When an SLP intervenes with a child or an adult with a language impairment, there may be unforeseen consequences. For example, working on writing with an adult with aphasia or loss of access to language, often due to stroke, may have a beneficial and unintended effect on spoken language. Likewise, adding too many new words to a child's language lesson may increase phonological precision but slow the child's delivery and decrease sentence length. The effect will vary with the amount of change, the individual child, and the type and severity of the impairment.

As we travel through this text, note the changes that occur and the overall effect on communication. Where appropriate I will characterize change based on the five areas of language.

We ended by discussing dialects. *I know, I know . . . you sound fine, but everyone else has an accent or a dialect!* Not so fast. If nothing else, please take from this chapter that a standard American English really doesn't exist in your daily use of language. "But everybody else speaks a dialect . . . I use the standard." No, you don't, and I don't either. I'm having fun with you.

We all speak a dialect. The important thing to recognize is that no one dialect is better than any other. They are all rule-based variations. And they're all valid.

In the real world, however, some dialects are rewarded, while others are punished by the culture as a whole. Still, within a given community, a dialect that is punished by the larger society may be rewarded and may give status to its user within the dialect community. It is very difficult to separate a dialect—Or a language, for that matter—from its culture.

Hopefully, this chapter has impressed you with the importance of language and the challenge that language learning presents for children. In **Video Example 1.5: Lust, Child Language Acquisition**, Dr. Barbara Lust of Cornell University further explores these topics.
Source: https://youtu.be/z9gATksP8xc

Main Points

- Speech is a motor act and a mode of communication, but not the only one.
- Language is the code used in communication. More specifically, it is a set of symbols and the rules for using them.
- Communication is the act of transferring information between two or more people. Speech and language are two of the tools used to communicate.
- Characteristics of language. Language is
  - A social tool
  - Rule governed
  - Generative
- Language has five parameters: syntax, morphology, phonology, semantics, and pragmatics.
- Pragmatics is considered by some sociolinguists to be the organizing principle of language that determines the other four aspects when communicating.
- We all speak a dialect of the language "ideal."
  - A dialect is a language-rule system spoken by an identifiable group of people that varies from the ideal language standard.
  - The deficit approach to dialects assigns status based on the amount of variation from the standard. In contrast, the sociolinguistic approach recognizes all dialects as valid and related forms of a language with no relative status assigned.
  - Factors related to dialectal differences are geography, socioeconomic level, race and ethnicity, situation or context, peer-group influences, and first- or second-language learning. Examples include African American English, Latino English, and "Asian English."
  - Dialectal considerations affect education, employment, and perceived status.

Reflections

1. Speech, language, and communication are different aspects of the same process. Can you contrast all three?
2. Not all of the message is carried by the linguistic code. How do the other aspects of communication contribute?
3. Language is a social tool that is rule governed and generative. Explain these three properties of language.
4. Language consists of five interrelated components. Describe these components as well as the units of morpheme and phoneme.
5. How do dialects relate to each other and to the parent language?
6. What factors contribute to the development of dialects? Relate these to the dialects found in the United States.

Chapter 2
Describing Language

Bill Aron/PhotoEdit, Inc.

Objectives

Models of language development help us understand the developmental process by bringing order to our descriptions and providing answers to the questions how and why. Of the many linguistic theories proposed, we will examine the two main theoretical positions. Each contains a core of relevant information and reflects divergent views of language and child development. We'll also discuss learning theories and look at the purpose and process of conducting language research.

Our knowledge of child language development is only as good as the research data that we possess. In turn, these data reflect the questions that researchers ask and the studies they design to answer these questions. When you have completed this chapter, you should be able to

2.1 Outline the relationship of Generative or Nativist theories and Interactionalist theories.

2.2 Differentiate the three main learning theories.

2.3 Describe the goals and issues of language research and analysis.

2.4 Explain the value of cross-language studies.

Key Terms

After reading this chapter you should know the following important terms:

accommodation
adaptation
assimilation
child-directed speech (CDS)
Constructionist approach
Emergentism
equilibrium
Generative approach
mental map
Nativist approach
organization
scheme
social constructivism
zone of proximal development (ZPD)

If you're like me, then unfortunately, philosophical theories and arguments often result in a headache. I know it isn't very academic of me, but my mind naturally wants to describe rather than theorize. Because I look for ways to unite rather than divide, trying to defend a notion that two theories are diametrically opposed always has been difficult. And now here we are in the present chapter, trying to explain the development and use of language from a theoretical point of view.

I'd be the first to admit that linguistic theories have a place. They help explain the overall processes we'll describe in this text. For many researchers, theories provide an explanation and also a framework for investigating language development and use. It is through these investigations that we collect the linguistic data from which this text is created.

As in any field of study, research is vital to our understanding of language. For example, many of our assumptions about language are based on the notion that language consists of single words or symbols and the rules for forming longer utterances. We said as much in the first chapter. Newer research is recognizing, however, that multiword units or strings are also important building blocks in both language development and processing. It's been found in data from several languages, for example, that speakers seem to know and use many recurring multiword sequences (Conklin & Schmitt, 2012; Wray, 2002). Examples might include "Hi, how you doing?" or "I don't understand." These multiword sequences seem to be used to be keeping the flow of language moving. Their effect on language acquisition is still to be explored.

Every proud parent collects anecdotes about his or her child's language. I bet your parents have a few. Such collecting is part of language research but in scientific study we are much more rigorous about how and what we collect. Technological changes in the 1970s have made more systematic study of child language development possible (Slobin, 2014). These changes include the development of easily transportable audio and video recorders and the introduction of computers. As a result, researchers can collect larger quantities of better quality data, store and search large bodies of language samples, and rapidly calculate statistical analyses of these data.

In this chapter, I will try to explain the primary theoretical approaches to the study of language and language development. After that, we'll look at learning theories, and then we'll explore how language data are gathered and explored. And I promise that I do all of this without inducing too terrible a "theories headache" on either your part or mine.

Linguistic Theory

The study of language and language development has interested inquiring persons for thousands of years. We know, for example, that Psammetichus I, a 7th-century BCE Egyptian pharaoh with a difficult-to-pronounce name, supposedly conducted a child language study to determine the "natural" language of humans. Two children were raised with sheep and heard no human speech. Needless to say, they did not begin to speak Egyptian or anything else that approximated human language.

Throughout history, individuals as different as Saint Augustine and Charles Darwin published narratives on language development. Several modern researchers devote their professional careers to the study of language development and use.

People study language development for a variety of reasons. First, interest in language development represents part of a larger concern for human development. Scholars attempt to understand how development occurs. Special educators and speech-language pathologists study child language to increase their insight into normal and other-than-normal processes. Those who specialize in early childhood education are eager to learn about the developmental process in order to facilitate child behavior change.

A second reason for studying language development is that it is interesting and can help us understand our own behavior. There is a slightly mystical quality to language. As mature language users, we cannot state all the rules we use; yet, as children, we deciphered and learned these rules within a few years. Few of us can fully explain even our own language development; it just seemed to happen.

Finally, language-development studies can probe the relationship between language and thought. Language development parallels cognitive development. Hopefully, the study of language development may enable language users to understand the underlying mental processes to some degree.

Vadim Ponomarenko/Shutterstock

Different theories have postulated how children learn language.

Because language and language development are so complex, professionals are often at odds as to which approach provides the best description.

- The linguist or language scientist is primarily concerned with describing language symbols and stating the rules these symbols follow to form language structures.
- Specialized linguists called psycholinguists are interested in the psychological processes and constructs underlying language. The psychological mechanisms that let language users produce and comprehend language are of particular concern.
- Other linguists called sociolinguists study language rules and use as a function of role, socioeconomic level, and linguistic or cultural context. Dialectal differences and social-communicative interaction are important.
- The behavioral psychologist minimizes language form and emphasizes the behavioral context of language, such as how certain responses are elicited and how the number of these responses is increased or decreased.
- The speech-language pathologist may concentrate on disordered communication including the causes of disorder, the evaluation of the extent of the disorder, and the remediation process.

The study of how children learn language is like many other academic pursuits in that different theories that attempt to explain the phenomenon compete for acceptance. Occasionally one theory predominates, but generally portions of each are used to explain different aspects of language. Part of the problem in designing an overall theory is the complexity of what we're theorizing about, both language and communication.

As with any field of inquiry, there are major theoretical differences. **Video Example 2.1: Lust, Child Language Acquisition** contains an outline of the major theoretical approaches in minutes 6:35-8:52.
Source: https://youtu.be/z9gATksP8xc

Nature Versus Nurture

If you've had an introductory course in psychology or development, you have no doubt been introduced to the nature versus nurture debate. In its simplest terms, the discussion centers on whether some aspect of development occurs because

- it is a natural and inherent part of being human *or*
- it occurs because of nurturance and learning from the environment.

In other words, is our destiny in our genes, in some aspect of being human, or do environment and learning mediate our biological inheritance?

This debate is alive and well in linguistics (Galasso, 2003). The way in which children acquire linguistic knowledge has been the focus of intense interest and debate in cognitive science for well over half a century. There are two primary approaches to language, representing nature and nurture, respectively:

1. Generative, or Nativist, and
2. Interactionist, which is characterized chiefly by Constructionism and Emergentism

Within this chapter we'll explore these approaches, examining their overall theories, limitations, and contributions. I've tried to give you the main points of each theory and to highlight the grains of truth in each. Look for similarities and contrasts. You might find it helpful to read each theory separately and allow time for processing before going on to the next.

Generative Approach

The Generative approach, or Nativist approach, assumes that children are able to acquire language because they are born with innate rules or principles related to the structures of human languages (Chomsky, 1965a, 1965b; de Villiers, 2001; Lenneberg, 1967; Wexler, 1998, 2003; Yang, 2002). Generativists assume that it would be extremely difficult for children to learn linguistic knowledge from the environment given that the input children hear is limited and full of errors and incomplete information (Chomsky, 1965a, 1965b). Even with these limitations, children are still able to acquire linguistic knowledge quickly because of the guidance of innate linguistic patterns. In other words, something innate or inborn guides a child's learning. According to Noam Chomsky, one of the chief proponents of the generative point of view, "To come to know a human language would be an extraordinary intellectual achievement for a creature not specifically designed to accomplish this task" (1975, p. 4).

Video Example 2.2: Steven Pinker: Linguistics as a Window to Understanding the Brain presents the contributions of linguist Noam Chomsky at minutes 15:25-18:35.
Source: https://youtu.be/Q-B_ONJIEcE

BASIC THEORY Beginning in the late 1950s, Noam Chomsky and others, working from the assumption that language is a universal human trait, tried to identify syntactic rules that applied to all human languages. Their thinking was that if there are commonalities in all languages, these common traits must represent some basic set of rules in each human. The rules were assumed to be present at birth. If so, these universal rules could explain how children decipher and learn language. It was theorized that these rules would be found in a location of the brain dubbed the "language acquisition device," or LAD. With universal rules in place, Nativists attempted to go further and now to describe the language-specific syntactic rules that enable adult language users to generate a seemingly endless number of sentences in that language. The result is two rule systems, universal and language-specific. So far, so good, I hope.

It seemed only natural to apply this new adult linguistic model to children's language acquisition. Known by various names, the resulting models basically assumed that children used the universal language rules found in their LADs to figure out the rules of the specific language to which they were exposed. In 1973, Roger Brown, a social psychologist, reviewed and evaluated these Generative models and concluded that none of them was totally satisfactory in explaining children's development of language. The basic problem was that the theories were adult-based and there was no evidence that children used, or even needed, the adultlike linguistic categories and rules to acquire language.

Many linguists concluded after looking at languages across different cultures that no single formal grammar was adequate to account for the acquisition process in all of the world's many languages (Slobin, 1973). For example, some theorists suggested that, instead of syntax, a semantic-cognitive basis existed for children's early language (Bloom, 1973; Brown, 1973; Schlesinger, 1971; Slobin, 1970). Called the Semantic Revolution, the position held that the semantic-syntactic relations apparent in children's early language correspond rather closely to some of the categories of infant and toddler sensorimotor cognition. Instead of the syntactic subjects and verbs used by adults to produce sentences, children used *meaning* units, such as *agents*, which caused action (*mommy, daddy*); *actions* (*eat, throw*); and *objects*, which received it (*cookie, ball*). This nonlinguistical cognitive knowledge might form the basis for linguistic units. Early word combinations seemed to consist of *agent + action + object* (*Mommy eat cookie; Daddy throw ball*), *possessor + possessed* (*Mommy sock*) and *object + location* (*Key table*), to name a few. Although these rules explained some child utterances, they failed to explain others. In addition, it was difficult to explain how children moved from semantic-based rules to the more abstract syntactic rules of adults.

As a consequence, a group of theorists began to advocate a return to adult syntactic models (Baker & McCarthy, 1981; Hornstein & Lightfoot, 1981; Pinker, 1984). These linguists argued that the discontinuity of semantic and syntactic models of language learning posed genuine problems of explanation. They argued instead for a continuity assumption in which children operated with the same basic linguistic categories and rules as adults (Pinker, 1984). At this point, these theorists reasserted that throughout our lives, all human beings possess the same basic linguistic competence, in the form of universal grammatical rules (Chomsky, 1980).

Generative grammar assumes that natural languages, such as English or Spanish, are similar to formal languages, such as mathematics. As such, natural languages are characterized by two things:

1. A unified set of abstract rules that are meaningless themselves and insensitive to the meanings of the elements (words) they combine.
2. A set of meaningful linguistic elements (words) that serve as variables in the rules (Tomasello, 2006).

We stated as much in the first chapter.

Language Learning

To learn a language, each child begins with his or her innate universal grammatical rules and uses these to abstract the structure of the specific language she is learning. It may be helpful to think of the universal rules more like a set of mental modules largely dedicated to language.

Acquisition has two components:

1. Acquiring all the words, idioms, and constructions of that language.
2. Linking the core structures of the particular language being learned to the universal grammar.

The universal grammatical rules contain a limited set of possibilities for how language fits together. These narrow possibilities help the child interpret the language input correctly and will later provide the model for the child's own language output (Pinker & Ullman, 2002). In short, the child acquires the rules of her specific language because she has a genetically determined capacity for learning language.

Being innate, the universal grammar does not develop but is the same throughout a person's life span. In other words, there is a continuity in language acquisition and use. The assumption, therefore, is that when a child says, "I'm eating a cookie," she has an adultlike understanding of the present progressive (*be* + *verbing*) form and can *generate* similar forms. Knowing the rules enables the child to generate novel sentences.

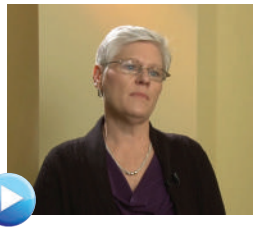
In **Video Example 2.3: Steven Pinker on How Children Learn Language**, Dr. Steven Pinker of Harvard University discusses how children learn language according to the Generative, or Nativist approach. **Source:** https://www.youtube.com/watch?v=ir7arILiqxg

THEORETICAL WEAKNESS Interestingly, some recent research is indicating that knowledge of a supposed universal phrase structure grammar does not simplify the task of deciphering and learning language (Ambridge, Pine, & Lieven, 2014). The difficulty with notions of universal grammar is often that explanations begin with adult language and builds backward, assuming that all child language is moving in the adult direction. The focus on theoretical abstractions that underlie language overlooks the impact of the language that the child hears on a regular basis (Ambridge, Pine, & Lieven, 2015).

Another problem with generative grammar involves the multiword units or strings mentioned previously. These fixed or semi-fixed structures, such as *How's it going?*, are not based on abstract grammatical categories but are fixed expressions. A large portion of human linguistic competence involves the mastery of these routine expressions.

Idioms (*hit the roof, on the ball*) are another category of expressions that do not fit the generative model. Ask your friends who are learning English as a second language if they experience difficulty with these expressions in which the meanings are nonliteral. These idiomatic expressions are not part of a core grammar that can generate grammatical rules. Instead, they seem to be treated as memorized wholes.

This seems a good time to segue to the interactional approach that sees language structures as emerging from use. In short, if the generative approach goes from innate rules to learning language, the interactionalist approach goes from using language to hypothesizing language rules



Video Example 2.4: Nativist Perspective of Language Acquisition presents a reflection on the application of a Generative or Nativist approach to teaching language to children.

Interactionalist Approach

The Interactionalist approach emphasizes the influence of a combination of biological and environmental processes on language learning. Children learn linguistic knowledge from the environmental input to which they are exposed (Christiansen & Charter, 1999; Goldberg, 2006; MacWhinney, 2004; Reali & Christiansen, 2005; Tomasello, 2005). According to this theoretical approach, children figure out the linguistic structures of the input language based on sufficient information from that language (Tomasello, 2000, 2003). Although there are related variants, the two main Interactionalist approaches are Emergentism and Constructivism.

As with Nativists, Interactionists are interested in language structure, but there is less theoretical commitment to language form and to ages of acquisition. To learn language, children rely on the general cognitive mechanisms they possess (Abbot-Smith & Tomasello, 2006; Elman et al., 1996; Gomez, 2002; Tomasello, 2003). Note that this process is not accomplished by a specific language mechanism or LAD but by general brain processes. Although a child may not be born with a bias for grammatical patterns as in a universal grammar, the brain is organized and functions in a way that results in an ability to learn language associations. We are always in danger of overstatement when we simplify, but we could say that Nativists assume we have a brain designed for learning and processing language, while Interactionalists assume we can learn and use language because we have a large, complicated brain.

In addition, Interactionalists consider the child to be an active contributing member in the learning process. The child and the language environment form a dynamic relationship. A child cues parents to provide the appropriate language that the child can understand and just happens to need for language acquisition. A parent's adapted way of speaking to a child, termed child-directed speech (CDS), varies in many ways from the adult's speech to other adults.

I'll focus on Constructionism, but in brief, Emergentism thinks of language is a structure arising from existing interacting patterns in the human brain. Although there is something innate in the human brain that makes language possible, that "something" did not necessarily evolve for language and language alone. For example, our brains seem naturally to seek patterns in incoming information. Children find patterns in the language input they receive. In other words, language is most likely what we do with a brain that evolved to serve many varied and complex challenges. A child's language emerges not from stipulated rules found in the LAD but from the interaction of general cognitive