

The English Language

From Sound to Sense

Gerald P. Delahunty
James J. Garvey

PERSPECTIVES ON WRITING

Series Editor, Mike Palmquist

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For Marna and Cian
To the memory of James J. Garvey

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The English Language
From Sound to Sense

1 Introduction to the Linguistic Study of Language

KEY CONCEPTS
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Language
Discourse
Text
Genre
Ideology
Language in education
Thinking critically about language
Standard English
Grammar
Other reasons for studying and teaching about language
The organization of these books
Hints for success

WHO THESE BOOKS ARE FOR

This is the first of two books for teachers about the English language. We believe that all teachers, not just English teachers, share the responsibility for helping students develop their abilities to speak, read, and write. Students must learn to communicate appropriately about math, chemistry, history, and every other school subject. Teaching students these skills necessarily extends across the curriculum. Thus, while one part of our intended audience is English K-12 teachers, we have prepared this book and its companion with teachers (and student teachers) from all disciplines in mind.

HOW TO USE THESE BOOKS

In these books, we use certain typographical marks to help you focus on key points. Important terms are bolded. You can find their definitions in the text and in the glossary. Examples are noted in italics or are separated from the text.

WHAT THESE BOOKS ARE ABOUT

These books are about language, but specifically about the English language

and its uses. The first book is about the grammar of English; the second is about related topics, including language variation (e.g., dialects), language learning, English spelling, and the history of the English language.

Generally, when people hear the word "grammar," they immediately think of "correct" or "incorrect" and "good" or "bad" language. Thinking about language in this way is said to be **prescriptive**. English has a long tradition of judging some expressions as "correct" and others as "incorrect." For example, expressions such as *We was* are viewed as "incorrect," even though a great many people use them. The "correct" version is said to be *We were.*

Counter-posed to the prescriptive tradition is the **descriptive** one, which developed in linguistics, anthropology, and sociology. This approach is concerned with describing and understanding the linguistic behavior of a community, without judging it. From a descriptive point of view, *We was* is unobjectionable when used by a member of a community of speakers who characteristically use this expression. However, it is unacceptable to the wider English speaking community in, for example, formal speaking and writing.

The point of view presented in these books is essentially descriptive. However, except where the topic is explicitly about linguistic variation, we describe the form of English used in relatively formal public speaking and writing. We recognize that language changes, and that consequently even the prescriptive rules have to change. We believe that these rules should be descriptions of the best accepted practices of the day rather than impositions (often irrelevant) on the language and its use.

COMMUNICATION

Communication occurs when one person acts with the intention of influencing the mind of another, for example, by getting him/her to entertain some idea, and when that other person recognizes the first person's intention to influence his/her mind. Clearly, it is possible to influence another person's mind unintentionally; for instance, if I (unintentionally) sneeze, I might prompt you to think that I might have a cold. However, this is a rather different kind of event than one in which I intentionally sneeze and you recognize that my sneeze was intentional. From my first (unintentional) sneeze, you cannot infer that I am trying to get you to think I have a cold; from my second (intentional) sneeze, you can infer that I am trying to get you to think something or another, perhaps that I have a cold.

Imagine that we have gone to a party together and that we want to coordinate our leaving. So, before we get to the party I say to you, "I'll pre-

tend to sneeze when I'm ready to go home," and you agree to interpret my sneeze in this way. When I sneeze at the party you can infer that I sneezed intentionally and interpret my sneeze as indicating my desire to leave.

For this communication to succeed two elements must be in place: first, the assumption that I intend to influence you in some way, and second, our agreement about the meaning of my intentional sneeze. There is nothing in the nature of a sneeze that requires it to mean "Let's go home." We could have agreed that it was to mean, "It's safe to slip upstairs to steal the host's jewelry." By specifying a meaning for a sneeze, we have created a little code, a sort of miniscule language.

LANGUAGE

Fortunately, we cannot read each others' minds. So, if we want to allow someone access to what we are thinking, we must provide them with clues that they can perceive. Language is a system that connects thoughts, which can not be heard, seen, or touched, with sounds, letters, manual signs, or tactile symbols (e.g., Braille) which can. In this way, one person's private ideas may be communicated to another person. For example, imagine that I want to communicate to you my idea that my study needs to be tidied up. You can't see, hear, touch, taste, or otherwise perceive that idea; it's locked away in my mind. To communicate it to you I have to cast it in a form that you can perceive—typically in spoken, visual, or tactile form—that is systematically connected to the idea, for example, the sentence, *My study needs to be tidied up*. Without this perceivable expression, you cannot know that I have an idea to communicate; without the systematic connection between the idea and the form of the expression, you cannot know which idea I want to communicate. So, language is a code that systematically connects private thoughts with public expressions. These books are about the systems we use to connect private ideas to public activities.

Language has been a major topic of research for well over two centuries. Linguistic research intersects with anthropology, biology, computer science, history, human development, literature, philosophy, politics, psychology, as well as reading and writing.

DISCOURSE

When we communicate we engage in **discourse**; that is, we deploy language with the purpose of providing our audiences with clues about how we want to influence them.

All discourse takes place in context; that is, the producer of a piece of discourse (speaker/writer) purposefully deploys, at some time and in some

place, clues about his or her intention which are to be interpreted by their intended recipient(s) (audience). The clues have, generally, been selected with that audience, in that time and place, and with those purposes in mind.

Some scholars argue that because different discourse situations require different patterns of communicative practice, we must speak of **discourses** rather than of discourse (Gee 1992, 1996). We have, for instance, the discourse in which we are currently engaged—the discourse of linguistics, which differs from the discourse of literary study, which differs from the discourse of chemical engineering, which differs from the discourse of history, and so on. A student who aims to be a practitioner in a field must master the ways in which practitioners in that field communicate with each other about topics in the field. Recognizing these specialized communicative practices has given rise to the Writing Across the Curriculum (WAC) movement.

TEXT

When people communicate, they produce **texts**. Texts always occur in some **medium**, which may be auditory, visual, tactile, or some combination of these. Texts also always occur in some **channel**, that is, the environment through which the medium travels from the text's producer(s) to its receiver(s). For ordinary face-to-face conversation, the medium is the air, which is set in motion by the producer and whose motions affect the ears of the receiver(s). Communication by telephone involves at least two channels—the air between the speaker's mouth and the phone, the mechanical and electronic devices that connect the speaker's and receiver's phones, and the air between the receiver's phone and his/her ear. Texts may incorporate non-linguistic elements such as pictures, diagrams, music, and the like.

GENRE

A **genre** is a communicative category. Genres differ from each other in participants, forms, and purposes. Texts come in genres; for example, a Shakespearean sonnet is a different type of text from a business letter, which is a different type of text from a casual conversation.

Communicative acts come in genres, too. The sales pitch of a car salesman differs from an end-of-term class presentation, which differs from texting a party invitation to a friend.

The various discourses require their own specific genres. For example, the discourse of creative writing in English includes the genres of the short story, the novel, and poetry (which includes such sub-genres as the lyric and the dramatic monologue). The discourse of business includes the annual report, various kinds of advertisements, and business letters.

IDEOLOGY

Many scholars stress the power of discourse and language to influence speakers' perceptions and conceptualizations of their worlds, and to create and maintain the structures of their societies. Educators interested in language emphasize its power to create and maintain **ideologies**, i.e., beliefs about the ways in which goods are distributed in society. Goods are "anything that the people in the society generally believe are beneficial to have or harmful not to have, whether this be life, space, time, 'good' schools, 'good' jobs, wealth, status, power, control, or whatever" (Gee, 1996: 21).

LANGUAGE IN EDUCATION

Language is central to education: it is the **means** by which educational content is communicated; it is an **object** of study; it is an object of **beliefs** that are important in education; it is a key element of students' **identities**; it poses potential **problems** in education, largely because of the beliefs we have about it; and it is a valuable **resource** for those who know how to make use of it.

Language is a *means of education* in that it is the primary medium of communication between students and teachers and between students and textbooks.

Language is an *object of education* because it is the material out of which texts are woven, and because language itself is the object of study in writing and speaking courses. We focus on language as we learn to edit our essays and speeches. We develop our vocabularies and learn the meanings, uses, and conventional spellings of words. We learn to control the genres required for various disciplines and the specific characteristics expected in those genres, for example, personal essays, academic papers of various sorts, business letters, reports, and magazine articles. Language is also an object of study in so far as we develop our skills in using it to communicate, to acquire knowledge from lectures and books, to integrate new information with old, to replace false beliefs with new true ones, and to increase or decrease our estimates of the likelihood that some belief we hold is true.

It is important to note here that students who are learning English as a second language labor under a double burden, because English is simultaneously both the means and an object of their education.

Exercise

When asked what she thought was the most important aspect of learning English as a second language, a Japanese student replied: "Knowing

many vocabularies." What do you think she meant? Is her expression an acceptable piece of English? How would you change it so it retains her apparent meaning and is acceptable? Why would you make that particular change? Is (your understanding of) her assertion true?

Language is also an *object of our beliefs*. Many people believe that some forms of English are good and others bad; that some languages are beautiful and others ugly; that some languages are limited in what they can express when compared to languages such as English; that people who speak certain varieties are uneducated, perhaps stupid, and unworthy of certain types of work. Beliefs like these constitute ideologies about language. Some ideologies are liberating and others quite oppressive. Whether liberating or oppressive, they must become objects of critical awareness for teachers and of critical discussion for students (Kress 1985; Fairclough 1989, 1992).

Language also represents one of the *key elements of our students' social, cultural, and personal identities*. Writing explores values our students may not be able to explore otherwise. As their writing improves, the range and sophistication of these identities increases.

Teachers have potentially powerful effects on students' lives. Our response to our students' language will influence their attitudes. Young children have a fascination with language and almost no inhibitions about it. Adults, in contrast, typically display considerable anxiety about their language. They often have "strongly negative attitudes towards their native speech pattern" (Labov 1972: 117). This anxiety is known as **linguistic insecurity**. This insecurity does not develop naturally; it is the consequence of repeated experiences in which their native speech patterns are disparaged, often by teachers (who should know better). This problem is particularly acute for students who are not native speakers of English, or who do not speak the variety of the language regarded as "correct."

Exercise

1. How do you feel about your ability as a singer? Would you be willing to sing Madonna's "Love Profusion" in front of your class? (It's on her *American Life* album, if you want to practice beforehand.) What experiences with singing have formed your attitude? What attitudes about singing do children have? What light does this shed on linguistic insecurity?

2. How many words do you have in your vocabulary? Consider first your **active** vocabulary, i.e., words you use regularly in speaking and writing, such as *often*. Then estimate your **passive** vocabulary, i.e., words that you recognize and understand, but which don't come readily to mind when you want them, for example, *prestidigitation*. Estimates based on objective study appear at the end of this chapter.

Language is *a potential problem* to the extent that it—or our beliefs about it—impedes students' learning. If we believe that students who speak English with a Latino accent, or who speak Black English (a.k.a. "Ebonics"), will be unable to keep up in our classes, then very likely they will not, because teachers' expectations strongly affect students' success in school. Because teachers respond to students' language on many levels, they must develop a critical awareness of their own linguistic preferences, prejudices, and beliefs—everyone has these beliefs, even linguists. They must also be able to critically evaluate textbooks, dictionaries, style manuals, computerized style analyzers, and newspaper articles on language, because these also embody assumptions about language, many of them just plain wrong, often destructively so.

Language is *a potential resource for teaching critical thinking*. We can evaluate our attitudes about other languages and other dialects and their speakers; we can collect linguistic data, observe its patterns, and articulate those patterns as hypotheses which we can then test; we can evaluate the ways we talk about language for their precision, and come to appreciate the value of precision in language use generally. Language data for analysis is very readily available. Students can collect their own data from bumper stickers, license plates, ads, poems—whatever. Schools (or the internet) can provide computerized collections of authentic spoken and written texts (**corpora**) along with computer programs to analyze them (**concordancers**). Because the linguistic study of language is fundamentally scientific, studying language in this way can provide us and our students with an understanding and appreciation of scientific methods.

Exercise

1. Write a brief essay on at least two of the ways in which language is an element in education.

2. In your college library, consult the journals *Linguistics and Literature,*

Style, and *Linguistics and Education*. Report back to the class on (a) the types of topics covered in each journal and (b) one article that interested you.

3. What do you understand by the term "grammar"?

THINKING CRITICALLY ABOUT LANGUAGE

Clearly, teachers must know about reading and writing, as well as about teaching their disciplines. But why should they learn about language? One answer is that teachers should have a well-developed critical understanding of at least some modern thinking about the nature of language and its roles in education because reading, writing, and all subject matters crucially depend on language. Good craftspeople always understand their materials, and as language is the raw material of the discourses of all disciplines, teachers should understand its nature.

Second, all modern approaches to reading and writing—cultural, feminist, Marxist, post-modernist, psychological—accord language a central place. Third, because the linguistic study of language is quite different in its approaches, goals, and methods from the approaches to the study of reading or writing, it complements those approaches. Fourth, societal attitudes to language (teachers', students', and parents') can profoundly affect students' learning and performance.

One of our goals is to enable you to **think critically** about language and the claims of those who write about it (including ours). Critical thinking has many facets, including creating and evaluating arguments, reasoning from premises to conclusions, and detecting covert claims in arguments. In language study, we think critically when we determine whether a grammar, style manual, or dictionary is appropriate for our students, or whether a linguistic claim (e.g., "double negatives make a positive") has any validity.

Exercise

Is it valid to say that double negatives make a positive in English? What evidence can you muster for your decision? How valid is your evidence?

Critical thinking is important in any discipline, but it is of particular importance in reading and writing. To be able to read in any discipline, students

must know how to accurately interpret the language of texts in that discipline and to be able to recreate their authors' meanings. Both of these tasks require, at a minimum, knowing the discipline's technical terms. Some disciplines may require readers to be knowledgeable about further aspects of the language. Literature students, for instance, must be able to understand language made difficult by archaisms, rhetorical figures, complex grammar, and willful grammatical and semantic violations (Dillon, 1978).

When writing, students think critically when they analyze their personal preconceptions and biases, when they assess the relevance and effectiveness of their ideas, and when they decide on the best linguistic formulation of those ideas for their intended audiences.

The ability to think critically about language is particularly needed now, because the school grammar tradition has generally become quite uninformed about research into current English discourse practices. The responsibility for this situation lies partly with linguists themselves. We have not been successful in our efforts to educate the public about language. However, the greatest share of the responsibility lies with institutions, journalists, and teachers who have vigorously defended an ultra-conservative *status quo*, who know little if anything about language, and who often misconstrue what linguists have to say about it. Many believe, for instance, that linguists claim that "anything goes in English these days." Nothing could be farther from the truth, as we will show in our chapter on Conceptions of Language.

STANDARD ENGLISH

Learning to read and write is partly a matter of linguistic development, i.e., the growth in a student's ability to communicate appropriately in an increasingly broad range of circumstances. Teachers who concern themselves with the linguistic development of their students typically view their role as twofold: (a) to promote their students' ability to speak, read, and write in their disciplines, and (b) to develop their students' ability to write in **Standard English** (SE), the variety of English generally expected in formal communication in various disciplines.

Exercise

1. Where around the world is English spoken? In what kinds of circumstances? For what kinds of purposes? Make lists from your own general knowledge before you consult sources such as Bernard Comrie's *The World's Major Languages;* David Crystal's *Cambridge Encyclopedia of Language;* Peter Trudgill and Jean Hannah's *International English: A*

Guide to the Varieties of Standard English; and the Summer Institute of Linguistics (SIL) website at http://www.ethnologue.com/show_language.asp?code=ENG (SIL is a Christian Bible translation organization.)

2. Why are things standardized? What would the consequences be if electrical outlets were not standardized throughout the US?

3. Consider the expressions We was and We were. Which is Standard English and which is not? How do you think that one became standard while the other did not? What do YOU think about expressions such as I ain't never been there, We was waiting for the ambulance, and the speakers who use them? Be honest.

4. Select a technical expression (from any discipline) that you believe all of your students should know and know how to use properly. Paraphrase that expression in non-technical English. Do the technical expression and its non-technical paraphrase have exactly the same meanings?

GRAMMAR

You probably answered exercise 3 on page 10 by saying that "grammar" tells us which expressions are correct. You would, of course, have meant "prescriptive grammar." However, linguists add at least two other interpretations to the word. First, they use it to refer to the knowledge that a speaker or writer of a language must have in order to be able to use the language at all. Second, they use it to refer to any attempt to describe that knowledge. We will return to these issues in the next chapter when we discuss prescriptive and descriptive approaches to language study more thoroughly. It is important, when we speak about "grammar," that we are clear, to ourselves and our audiences, which meaning of "grammar" we intend.

This first book is about the grammar of English. Some of our readers will be required to teach grammar classes *per se*; others will use information about English grammar while teaching composition; and still others will use it while teaching writing-intensive classes across the curriculum. It is important to note that grammar refers only to a part of language, and that these books deal with language, not just grammar. We believe that a teacher's knowledge of language is far more broadly relevant than just knowledge of "grammar."

It is also important to recognize that teaching "grammar" is highly controversial. To get a sense of the arguments, we recommend that you read

the relevant articles in *English Journal* 1996: 85.7 and 2003: 92.3, as well as other NCTE publications such as *Grammar Alive: A Guide for Teachers* (Haussamen et al 2003) and *Code Switching: Teaching Standard English in Urban Classrooms* (Wheeler and Swords 2006). You might also browse Freeman and Freeman (2004) and Honegger (2005). Neither you nor we can predict what you will believe about language, grammar, and the teaching of either by the time you have read these books. However, we do know that in discussions about how to teach writing, you will hear arguments that teaching grammar "out of context" does not improve students' writing. (Generally what is meant by "grammar" in those discussions is the set of prescriptive conventions for speaking and writing Standard English.) Certainly there is a large body of research going back more than a century purporting to support this position. However, we repeat, these books are not just about grammar; they are about language, including how grammar fits into language. It is as important for teachers to know about language as it is to know about their subject matter. A teacher who knows nothing about language is a cyclist without wheels. Worse, a teacher who knows nothing about language is a chemist who knows (and cares) nothing about the environmental consequences of the substances he or she creates.

Our approach to the study of language is heavily influenced by the results of recent linguistic research and methods. This allows us to tie our discussion to critical thinking, literature, Writing Across the Curriculum, and composition studies, as well as to philosophy and the social, psychological, neurological, and computer sciences (see Traugott and Pratt 1980 as well as journals like *English Journal* and *Style*).

Most of this book deals with English grammar. Aside from the fact that the general public expects teachers to have a mastery of grammar (by which is usually meant prescriptive grammar), you will probably be expected to teach the subject in one way or another. We do not suggest that you use this book as a syllabus. It contains too much material and is not geared to a junior or senior high-school audience. Nonetheless, in spite of the amount of material it covers, it's merely a good basis for continuing your study of language. We hope that you will find the analytic and critical methods of exploring language used in the books to be more productive and interesting than the more conventional handbook approach—exposition plus drill-and-practice.

More importantly, we hope that you will present to your students the broader conceptions about language that are expressed in these books. These conceptions are presented initially in our chapter on Conceptions of Language, but are developed in various ways in other chapters.

OTHER REASONS FOR STUDYING AND TEACHING ABOUT LANGUAGE

Besides its importance in the development of critical thinking skills, there are many other reasons for studying language. You might want to know about language variation ("dialects" of various sorts), about how languages change over time, about the history of English, about the standardization of languages, about how languages are learned, about language disorders, about the relationships between language and culture or society, or about how computers are programmed to understand or produce language. These are all to one degree or another relevant to teachers and we deal with many of them in these books.

Deciding what should be included in books like these is remarkably difficult. We have followed the guidelines of the National Council of Teachers of English (NCTE) and the National Council for Accreditation for Teacher Education (NCATE) about what English teachers should know, and we depended on the research on Writing Across the Curriculum (WAC). Nonetheless, because such a huge amount is known about language generally, and about English in particular, and because (as in any area of vigorous intellectual activity) there are many competing approaches to these topics, it would be impossible to synopsize them all here. In the first book, we present a grammar of English which addresses traditional topics and concerns, but which is influenced considerably by current grammatical and discourse research. In the second book we present a range of topics that we hope will be of interest and value to teachers across the disciplines.

Fulfilling the goals of instruction becomes particularly important in a world growing in technological complexity, social diversity, and multiple "Englishes." (See the essays in Kachru 1992 and Kachru and Nelson 1996, as well as Crystal 2003; Jenkins 2003; McArthur 1998; Melchers and Shaw 2003.) Many students are passionate about their studies in literature, the physical and social sciences, business, or in other intellectual pursuits; unfortunately, however, many students and teachers see the study of language as merely the study of "correct grammar." We have already begun to sift through the various meanings of "grammar" and will develop this discussion in later chapters.

Teachers face a complex set of responsibilities. Parents, boards of education, and legislators look increasingly to school systems to prepare students for the demands of the future. Worries that American students lag behind those of other developed countries translate directly into concerns about public funding (i.e., taxes) and accountability in education, as the No Child Left Behind Act requires. These pressures appear in the form of demands for success on standardized tests, for "getting back to basics," for public funding of

private education ("vouchers" and "charter schools"), for longer school years, for ongoing competency testing for teachers, and for the assessment and ranking of schools.

From our perspective, teachers' responsibility is to their students. We must meet the needs of the learner rather than simply present material on a take-it-or-leave-it basis. As a result, the **learnability** of classroom material becomes more important than its **teachability** (how easily it can be taught), or its **assessability** (how easily it can be assessed).

Moreover, in the coming generation, the diversity of its students in US classrooms will change dramatically. The 2008 US Census Bureau projected percentages for the major racial/ethnic groups are displayed in the following chart:

	2008	2050
White	66	46
Hispanic	15	30
Black	14	15
Asian	5.1	9.2

(See U.S. Census Bureau National Population Projections.) In 2005 the percentage of the US population born abroad was 12.4.

These projections suggest that in addition to knowing their disciplines and how to teach them (ideally by incorporating lots of writing), teachers will also have to know about how to teach ESL (English as a Second Language).

In the rest of this introduction we will explain the organization of these books and provide some hints for working successfully with them.

THE ORGANIZATION OF THESE BOOKS

The next chapter of this book (Conceptions of Language) is on the nature of language. The remaining chapters are on various aspects of the English language, including its sound system, its vocabulary, its parts of speech, word meanings, and the ways in which words are combined into phrases, clauses, and sentences—essentially the grammar of English.

Book I gives you some basic information about English grammar, about how to do simple linguistic analyses, and about thinking critically about language. Because it is impossible to remember the analysis of every expression you might be asked about by a student (there are far too many), our main concern is to help you become independent by providing you with the means to do linguistic analysis as you need it.

We regularly use an analytic method, in which we formulate criteria for determining how to categorize words, phrases, or sentences. For example, whenever we want to know the part of speech of a particular word, we use these criteria to test a **hypothesis** about the word's part of speech. We will ask you to do similar activities in the exercises, sometimes by gathering data, sometimes by analyzing material that lies just a step beyond what is covered in the text.

Book II deals with selected topics of particular importance to teachers: spoken and written language; spelling; variation in language; usage; punctuation; history of the English language; and language acquisition. Our presentation brings together current studies in each of these areas and prepares you to read applied studies that you will encounter in your career. These chapters can be read independently of Book I, though on occasion you will find some cross-references to chapters in Book I, along with some phonetic notation that may send you back to our chapter on Phonetics and Phonology.

In many instances we will mention a topic, briefly discuss it, and return to it in greater depth later. Our hope is that this cycling will provide you with an opportunity to get an initial familiarity with a topic and then build on that familiarity later.

These books are far from covering the wealth of information on topics that you might be interested in as a teacher. To survey all of these would require several more books. We encourage you to consult your instructor for further references and bibliographical resources, for example on linguistics and literature, composition, or reading.

HINTS FOR SUCCESS

The study of the English language is demanding. First, you will find yourself confronting challenges to linguistic assumptions (and even prejudices) that have become ingrained in you through your education and that are widely accepted without critical examination by the majority of educated English speakers. Second, you may find yourself in a mode of analysis quite different from that of your own studies. Third, you will confront considerable linguistic detail and the large number of new terms required to conceptualize and describe it. While we cannot guarantee that these new ideas will be easy to master (although many people do find them so), we believe that they are worth your effort and will serve you well in your career.

Because what you will learn in these pages is as much skill as information, *do not expect to master this material in a single reading*. The best strategy for most people is to do a preliminary reading, do the exercises, and then reread (and reread again). Research on learning and remembering shows what

is perhaps obvious—the more frequently and deeply you review material the better you will remember and understand it. If you are a student, attend class and ask questions; if you are having difficulties, the chances are good that many of your classmates are too and will benefit from the instructor's answers to your questions.

Exercises are scattered throughout the book. We encourage you to tackle as many as possible. This need not involve working them out in full detail (unless your instructor requires it); you might just work out the outline of a solution. However, you cannot learn the analytic skills required to study linguistics or grammar without doing lots of hands-on work. If you have difficulties with a problem, try to identify them as specifically as possible. If you get an incorrect answer, make sure also to get an explanation of the correct one. Try to retrace the thinking that led you to miss the question. Sometimes you can learn more from mistakes than from perfection. One of our goals is to help you develop your skills in independent language analysis. Teachers are regularly called upon to answer questions whose answers cannot be found in textbooks or reference works. Doing exercises is essential for independence.

Terminology is plentiful in linguistics, just as in every other discipline. Remember that technical terms usually have specific meanings so you may not be able to substitute ordinary words for them. We have provided glossaries to help you identify definitions; you should consult them often. Be particularly careful with terms (e.g., **semantics)** that may have a familiar meaning in ordinary language, but a significantly different one in technical usage.

Definitions should be supplemented with *explanations*, elaborations of the minimal statements in the glossary. Remember, though, to use precise language in defining terms. Linguists like to think of themselves as scientists and so value precision and accuracy. Explanations may be taken from the text (or from class notes, if you are a student). Try to have a specific, prototypical *example* of each term. Select an example that is clear to you and is uncontroversial, and be sure to understand just why your example exemplifies the concept.

Memorization has had a bad press, but it is necessary more often than we think (and not only for exams). We do not encourage memorization for its own sake, but rather to make your passive knowledge more active. The best time to memorize is after you have become familiar with a concept through exposure. For long lists (e.g., the prepositions of English), do not try to remember every item; select a small number, and then only to illustrate a concept, and use the criteria given in the book for deciding which other items

belong to the list. As you gain experience, try to add gradually to that short list. We do not recommend that you require your students to learn lists of items, unless they are learning English as a second or foreign language (and even then only sparingly).

Second opinions aren't just good for your health. Reading other authors on the topics of these books will greatly help you to learn and remember what you study. We encourage you to seek out other books on these topics, beginning with those we've listed in the *References and Resources* at the end of each chapter.

At the head of each chapter, we list the chapter's key concepts. For teachers, we hope these will help you find topics you want to read about. For students, we imagine these topics serving as the focus for essays that might form a part of your course work. The internal parts of the chapters are clearly indicated by headings to allow for easy access.

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How many words are in your vocabulary? According to Aitchison (1994: 6), "the average college student turned out to know approximately 58,000 common 'basic words,' 1,700 rare 'basic words,' and 96,000 derivatives and compounds. The total comes to over 150,000. The highest student score was almost 200,000, while even the lowest was over 100,000." Are you surprised by these numbers? Other scholars suggest even higher ones.

GLOSSARY

ACTIVE VOCABULARY: those words that we have ready access to for speaking and writing.

ASSESSABILITY: the ease or difficulty with which knowledge can be assessed.

CHANNEL: the environment through which the communicative medium travels from the text's producer to its receiver(s).

COMMUNICATION: activities by which one person intends to influence the mind of another person.
CONCORDANCER: a computer program that allows you to search through computerized collections of linguistic data for specified expressions along with some of their context and to perform statistical operations on the data.
CORPUS/CORPORA: collection(s) of linguistic data, spoken or written, which may or may not be computerized.
CRITICAL THINKING: the process of evaluating the validity of assertions and arguments.
DESCRIPTIVE GRAMMAR: any attempt to describe the linguistic knowledge and behavior of individuals or communities without judging or evaluating them as "correct/incorrect" or "good/bad."
DISCOURSE: communicative activities, typically involving language, in particular contexts, whose purpose is to provide audiences with clues about how we want to influence them.
GENRE: communicative categories differing from each other in participants, forms, and purposes.
GRAMMAR: the word has several meanings. (1) conventions that judge which of several expressions belongs to Standard English (see **PRESCRIPTIVE GRAMMAR**); (2) the knowledge that a speaker or writer of a language must have in order to be able to use that language at all (see **DESCRIPTIVE GRAMMAR**); (3) any attempt to describe that knowledge; (4) publications in which the prescriptions and descriptions are expressed (e.g., a Spanish/English/etc. grammar).
HYPOTHESIS: a prediction derived from a theory that may be tested to see if it is true or false. If it is true, the theory is strengthened; if it is false the theory is weakened, perhaps disproved.
IDEOLOGY: "a social theory which involves generalizations (beliefs, claims) about the way(s) in which goods are distributed in society... By 'goods' I mean anything that the people in the society generally believe are beneficial to have or harmful not to have, whether this be life, space, time, 'good' schools, 'good' jobs, wealth, status, power, control, or whatever. By 'society' I mean any and all groupings of people who share beliefs about what counts as 'goods' (and since probably all humans share *some* of these, all humanity counts as one sort of society). In this sense we all belong to many societies." (Gee, 1996: 21)
LANGUAGE: a system that connects private thoughts with public symbols.
LEARNABILITY: the ease with which material can be learned by students.
LINGUISTIC INSECURITY: the feeling or belief that one's language is in some way deficient, for example that one's accent is not as good as other accents.

MEDIUM: the sense(s) involved in communication—hearing, seeing, touching, or some combination of these.

ORDINARY LANGUAGE PHILOSOPHY: an early to mid twentieth-century philosophy concerned with the meanings and uses of language.

PASSIVE VOCABULARY: those words whose meanings we recognize when we hear them spoken or see them written but cannot easily bring to mind in speaking or writing.

PRAGMATICS: the study of contextually situated meanings.

PRESCRIPTIVE GRAMMAR: the set of conventions that define the standard variety of a language; generally couched in evaluative and judgmental terms such as "correct/incorrect" and "good/bad."

SEMANTICS: (the study of) the literal meanings of linguistic expressions.

STANDARD ENGLISH: the variety of English expected in formal writing and speaking, which is codified in dictionaries and style manuals, and taught in composition classes.

TEACHABILITY: the ease with which material can be organized for presentation in classrooms.

TEXT: the auditory, visual, and/or tactile artifacts produced by communicators.

2 Conceptions of Language and Grammar

KEY CONCEPTS
The study of language
The roles of the English teacher
What is a language?
Competence and performance
Approaches to the study of language

THE STUDY OF LANGUAGE

The study of spoken and written language occupies a significant part of contemporary primary and secondary school and university curricula. The grammars, handbooks of style, and composition texts used in these curricula are based on various assumptions about language and about why it should be studied. It is important that teachers have a critical understanding of these assumptions, which in many instances are either indirectly stated or omitted entirely. These books are designed to help you to:

- develop the critical resources you need as a teacher to respond to many language-related issues;
- understand the many concepts needed to talk appropriately and accurately about language;
- develop skills that you will use in everyday teaching of language, literature, reading, and writing.

In the pages to follow you will encounter ideas about language that may be new to you and which may contradict ideas you've been taught. We cannot guarantee that these new concepts will be easy to master, but we do believe that they are worth your best efforts. We will, as we said earlier, try to begin with what you know about language. For example, you have probably been taught to avoid non-standard expressions such as *seen* or *seed* instead of *saw*, to avoid multiple nouns as modifiers, to make sure that your subjects and verbs agree, to use parallel structures where possible, and the like. These are **usage** rules. They have at least two jobs to do. First, they help define the standard variety of English—recall our question in our introductory chapter that asked you to consider why anything, e.g., electrical outlets, might be standardized. You probably answered by saying that standardization allows the greatest number of people to use it for the greatest number of purposes. You might also have added that if something is standardized, then it can be maintained in that form for a long period of time. Standardizing a language

has the same goals: to allow as many people as possible to communicate effectively with each other, and to allow people at any time to read texts that were written perhaps hundreds of years before they were born, much as we read the novels of Jane Austen now. And standardization allows us to write texts that will be understood by many generations to come.

The usage rules help ensure that standard English is used in formal writing and speaking so as to make our writings and speeches clear, efficient, and effective, given our purposes in communicating and the characteristics of our audiences. Rules that tell us which forms to choose (*saw* not *seen* or *seed* as past tense of *see*), or what syntactic patterns to avoid (multiple noun modifiers), or to use (parallel structures) are **prescriptive**. Ideally they prescribe what are taken to be the most generally used formal writing and speaking practices at a particular time.

Usage rules are extremely important. Speakers and writers who violate them are likely to be judged harshly. It is a major part of any teacher's job to ensure that students can write in accordance with these rules. They can be found in composition textbooks, which often devote entire sections to them; they can also be found in writers' handbooks of usage rules, in usage dictionaries, or in selected entries in desk dictionaries. Unfortunately, these handbooks do not always agree with each other and do not always keep up with the accepted writing practices in important genres. Moreover, the conventions differ from one discipline to another.

However, for teachers to be able to teach the usage rules, they must understand the concepts that underlie them and the terminology in which they are expressed. For example, they must know what nouns are, be able to recognize them in texts and to produce examples of them on demand; what "past tense" means and how it is formed; what "agreement" means and how it is expressed; which structures are parallel and which are not; and what participles are so that they will be able to recognize them when they "dangle," or to teach them in order to expand the range of structures their students can use in their writing. And they must be aware of current usage controversies.

You may know about some of these things. For example, you may know about the traditional **parts of speech**, about **subjects** and **predicates**, about **direct** and **indirect objects**. In this book we will develop all these and related ideas by making use of the findings of modern linguistic and discourse studies. Our point of view will be **descriptive** rather than prescriptive. That is, rather than prescribing how someone thinks the language should be, we will attempt to describe as objectively as we can as much of modern standard English as space allows. Our descriptive stance is that of linguistics in

general, which tends to think of itself as scientific. We include a chapter on Usage in Book II.

Exercise

Many people think of dictionaries as the final arbiters of usage issues, particularly regarding words. Read the front matter (i.e., all the text before the list of words) of your dictionary and find out how its editors view usage issues. Then look up some words whose usage is controversial, such as *hopefully* as a sentence adverb, e.g., *Hopefully, a solution will be found for the problems in the Middle East; unique* as a gradable adjective, e.g., *His writing style is very unique; demagogue* as a verb, e.g., *He demagogued his way into the White House;* and *lifestyle* to mean culture, e.g., *The San people of Southwest Africa enjoy a hunter/gatherer lifestyle*. How does your dictionary treat these controversies? Is the treatment consistent with the editors' front matter claims? When was your dictionary published? Do you think that the publication date might have an effect on these controversies? Our Usage chapter explores these issues in more detail.

NOTE: For a fascinating story about the OED, you might read Simon Winchester's *The Professor and the Madman: A Tale of Murder, Insanity, and the Making of the Oxford English Dictionary.* For an excellent history of the development of the dictionary see Winchester's *The Meaning of Everything: The Story of the Oxford English Dictionary.*

THE ROLES OF THE ENGLISH TEACHER

Standard English

We recognize that teachers are caught between apparently irreconcilable forces. They must ensure that their students master the forms of English that are regarded as acceptable, correct, educated, and expected in formal communication, i.e., as **standard**. However, educational linguistic research demonstrates that students will not learn the conventions of standard English unless teachers respect their native ethnic, regional, and social varieties. So how might this impasse be resolved?

First, we must know what is and what is not currently acceptable. Second, we must have a framework of concepts and terminology that will allow us to understand and teach about language. Third, we should adopt the be-

lief that our only legitimate role is to **add** control of standard English to our students' linguistic repertoire, not to eliminate our students' native varieties on such unsupportable grounds as that they indicate laziness or stupidity. They don't! These books are designed to help teachers fulfill these roles.

In addition, teachers should make use of their students' natural language learning abilities and what is known from fields such as linguistics and applied linguistics about teaching language. For example, rather than overwhelming students by red-lining every error, teachers should select those "errors" which seem amenable to correction at the time and bring the students' attention to the similarities and differences between their own practices and the target ones. They should then focus on the target until it is well controlled. (See the work of Rebecca S. Wheeler and her collaborators, e.g., Wheeler and Swords 2004: 470-480; Wheeler 2005: 108-112.)

Linguistic variation and bilingualism

All languages vary. That is, there is no language whose speakers all speak in the same way in all circumstances. Groups of people may speak differently from each other and still be speaking the same language; that is, a language may exhibit **dialect** variation. A simple demonstration of this is to conduct an informal survey about the words people use for soft drinks, such as *soda*, *pop*, and the like, and then identify where in the country the various expressions are used. Languages vary by nation, region, ethnicity, gender, age, and almost every other grouping of people that one can imagine.

Languages also vary according to their uses. An individual speaker will vary his or her **style** of speech according to contextual factors such as the formality of the occasion. For example, on relatively informal occasions we are likely to use abbreviations such as *can't* and *should've* in our speech and writing; on more formal occasions we will use the unabbreviated forms *cannot* and *should have*.

The **mode** or **channel** by which language is transmitted can affect it also. The language of a personal phone call differs from that of a face-to-face conversation and from a radio or TV call-in program. Spoken language differs from written language, though in rather complex ways (Biber et al. 2002).

Occupations may have their own special varieties of a language, that is, they differ in **register**. For example, the technical terms you know or will learn about linguistics and grammar belong to the linguistics register, whereas *corner kick* and *throw-in* belong to the soccer register.

In addition, individuals and groups make use of various **genres** or **text types**. These are extended stretches of language, written or spoken, which have relatively stable and identifiable characteristics. Genre is a well-estab-

lished notion in literature; it refers to novels, shorts stories, poems, and such sub-genres as sonnets and lyrics. More generally, text types include such categories as business letters, term papers, newspaper reports, opinion pieces, and many others, which are characterized by their content, their purposes, their textual structure, their form of argumentation, and level of formality (Crystal 2003: 200-1). These are often divided into descriptive texts, which have to do with the location of entities in space; narrative texts, which have to do with situations and events in time; directive texts, which are concerned with future activity; expository texts, which explain phenomena; and argumentative texts, which attempt to confirm or change the beliefs of their readers (Gramley and Pätzold 2004: 152-5).

Most communities and many individuals around the world are **bi-** or **multi-lingual**; that is, they make use of more than one language. People in the United States make use of many languages. Some languages, like Navajo and Hawaiian, are native to the US; others, like Spanish, French, German, and English, are longtime residents but were brought by colonists; and still others, such as Thai and Hmong, were brought by recent immigrants.

In all communities, some varieties and languages are favored and others denigrated. Children whose native language is not respected in the community or the school are at great risk of failing in school. Because language is such an important component, not just of education, but of an individual's personal, ethnic, and social identities, teachers must tread a fine line between their responsibility to teach the standard variety required for social mobility and respecting students' native varieties as manifestations of their identities. Just as every child has a right to expect teachers to respect their sex, ethnicity, social class, color, and creed, so every child has the right to expect teachers to respect their language. It is a lot easier to accept linguistic variation if we understand it and understand our own attitudes toward it. We deal with this issue in more depth in our chapters on Variation and Usage in Book II.

In the rest of this chapter, we will consider some of the basic ideas about language that inform this book.

WHAT IS A LANGUAGE?

As teachers of language (which we are, whether we teach linguistics, literature, ESL, or physics), we need to have a clear notion of what it is that we teach. Surprisingly, few people have even the most rudimentary conception of what a language is, even though they use (at least) one in nearly every waking moment of their lives. Generally we can lead perfectly adequate lives without conceptions based on serious reflection on important topics. For instance, we do not need a precise understanding of physical notions such

as *force*, *work*, or *energy* to hit home runs or drive cars. But education aims to help us understand things that we take for granted. Language is a prime example. It is a device of mind-boggling complexity, but few people have a clear conception of its nature and use.

So, what is a language? What we have in mind here is a natural (i.e., not an artificial or computer-based) system for human communication, such as English, Chinese, Swahili, or American Sign Language (ASL).

In this book, we'll assume that

> A language is a set of rules, unconsciously present in the mind, which enables human beings to represent and communicate meanings by producing audible, visible, or tactile symbols that these rules systematically relate to those meanings.

This definition may seem forbidding and abstract, so let's look at it piece by piece.

A language enables its users to communicate meanings by systematically relating perceptible actions and meanings.

Meanings are mental states or activities, and as such cannot be directly observed. If we want to communicate our meanings to someone else, we must use something they can perceive with their senses—for example, noises, gestures, flag waving, or marks on paper. For any of these to communicate successfully, there must be a system that consistently relates the observable signals with the private meanings. For lots of good reasons, sound evolved as the primary mode of human communication. This issue is discussed in the next section.

Most people conceive of meaning in terms of **information**—ideas about the external world or about our thoughts and beliefs. This is called **referential** (**experiential**, **ideational**) meaning. Referential meanings represent events such as *The US women's soccer team won the World Cup* or states such as *The sun is a small star.* They are descriptions of states of affairs, real or imagined. Referential meaning is probably the most commonly communicated type of meaning. However, there are other kinds:

- **Expressive meaning** reflects the emotional state of a speaker. *Ouch!* has no referential status but expresses pain.
- **Persuasive (conative) meaning** refers to the intended effect of an utterance on its hearer; it attempts to get an audience to perform an action or to believe something. *Get out!* is an attempt to get

someone to leave; *I love you. Honest, I really do!* is an attempt to get someone to believe that "I" loves them.

- **Social (phatic, interpersonal) meaning**, as in expressions such as *Hi!* and *How are you?*, establishes and maintains social contact between communicators.
- **Textual meaning** is communicated by utterances that constitute (part of) a text, e.g., *The dogs were very noisy. The German shepherds were the worst*. Without *very noisy* in the first of these two sentences, it would be impossible to interpret *the worst* as *noisiest*. This meaning derives from the assumption that the two sentences are to be interpreted as a **text**, that is, one or more sentences or utterances intended to be taken as a coherent whole. Some expressions have only textual meanings. For example, in some of its uses *so* indicates that the expression it introduces is to be interpreted as a conclusion drawn from a prior expression or from the context. The retort *So what?* is a demand to know what conclusion to draw from what a speaker has just said.
- **Metalinguistic meaning** addresses matters concerning the language itself. Definitions and word puzzles are metalinguistic, e.g., *What I meant to say was . . .,* or *What English word has three double letters in a row?* (See the end of this chapter for an answer.)
- **Poetic meaning** reflects nuances of interpretation created by the manner in which information is expressed. It is the aesthetic dimension of language and language use. Advertisers make good use of language's poetic possibilities. They use puns as well as rhythm and rhyme: Wendy's restaurants advertised their extended business hours with the pun, *See ya later!*; a Cheyenne, WY store advertised tires with the rhyme, *Great deals / On tires and wheels*; local authorities attempt to draw drivers' attention to road work with the pun *Give 'em a brake!* and the rhyme *Cone Zone*.

Exercise

1. Explain how each expression below illustrates one (or more) of the meaning types just discussed:

a. Don't touch me!
b. There is a bull in that field.
c. Hello. Are you there? (phone conversation)
d. No pun intended.
e. Jeanne is wearing jeans.

f. I hate broccoli.
g. Gag me with a spoon.
h. I've typed *teh* and *langauge* again.

2. For each of the following types of meaning, give a brief text that illustrates it:
a. persuasive (conative) meaning
b. referential meaning
c. social (phatic) meaning
d. textual meaning
e. poetic meaning
f. expressive meaning
g. metalinguistic meaning
h. referential and conative meaning

A language uses sound as its primary mode of expression

In saying that sound is the "primary" mode of linguistic expression we mean that it is the principal, earliest, and most fundamental mode. Literate people who are not linguists tend to assume that writing is the most important form of language. In fact, they tend to assume that the spoken language should be modeled on its written form. For example, many people will use a word's spelling to resolve a dispute over its pronunciation, and the pronunciation of some words has changed to be more consistent with their spellings. For instance, *often* has historically been pronounced *offen*. However, many people nowadays think that because it is written with the letter <t>, it should be pronounced with a [t] sound.

Linguists, in general, believe that sound is the primary medium of language, because it precedes writing in evolutionary and individual development; because letters represent sounds, not vice versa; and because we use spoken language more frequently in our lives, so it is arguably more important to us. To support their claim, linguists point out facts such as the following:

- children learn to talk before they learn to read and write
- children learn to talk naturally, that is, without being expressly taught; reading and writing must be taught
- there are many languages that have no writing systems
- writing is a comparatively recent historical development (it has been around for only a few thousand years); spoken language is at

least 60,000 years old (see Aitchison 1996, 1997 ch. 2)
- all writing systems are attempts to represent aspects of spoken language, generally individual consonants and vowels, less frequently syllables, less frequently still, words

We do not deny the importance of other modes of expression. Written language is extremely important in modern societies, and we all spend many years mastering it. The sounds speakers produce and which are (partially) processed by hearers' ears fade away very rapidly. Writing attempts to overcome this **rapid fading**.

There is always a dynamic relation between spoken and written language. Each influences the other to various degrees. For example, currently we tend to allow more speech-like forms into our writing than our grandparents did, e.g., contractions such as *can't*, *I've*, and *she's*.

Sign languages of the deaf, which use the hands to express meanings, are another important language type. But while they can express whatever a signer wishes to communicate, just as a spoken language can, they are a relatively uncommon form of language.

If we group together sounds, written symbols, and manual gestures as linguistic **forms**, then we can think of a language as a system for relating forms to meanings.

Exercise

1. Find and discuss three differences between spoken and written English (or any other language that you are familiar with). For example, you might consider "tone of voice."

2. What advantages or disadvantages do you think spoken language has over other forms of communication (such as written language, manual language, waving flags, scratching signs in dirt or rocks, etc.)? Think both in terms of our distant ancestors and of practical contemporary needs. As a concrete example, you might consider how to explain, without speaking or writing, how to bake bread, wash a car, upgrade a computer, or use a phone keypad to respond to commands from a company's computerized answering system. (Consult actual texts, such as recipe books, labels on bottles, or users' manuals). Refer to your personal experience wherever possible. (You might also look at software that turns speech into typed text, e.g., Dragon Naturally Speaking.)

The relation between meaning and sound is conventional and arbitrary

According to Ferdinand de Saussure (1983 [1916]) and accepted by the vast majority of linguists, the relation between a word's sound and its meaning is **conventional**. That is, the speakers of a language tacitly agree on which meanings to associate with which sounds. For example, the fruit we make apple jelly from is called *apple* in English, *pomme* in French, *manzana* in Spanish, *úll* in Irish, and other names in other languages.

This conventional relationship is **arbitrary**. That is, speakers of a language, as a group, are free to associate any sounds with any meaning. It doesn't matter which sounds they associate with which meanings. Thus the sound of the word *I* is arbitrarily (though not randomly, i.e., without purpose) chosen by English speakers to represent the speaker of an utterance; we could equally designate the speaker by the sounds *je* as in French, or *yo* as in Spanish, or *ich* as in German, or *wo* as in Chinese, or any other sound(s) we agreed on.

From the claim that sound/meaning relationships are both conventional and arbitrary, it follows that there need not be any similarity between sound and what it refers to. The word *pigeon* bears no resemblance to the birds it refers to. Similarly, the words *yell* and *whisper* can be said either loudly or softly, even though they refer to loud and soft sounds. *Giant* and *dwarf* have the same number of sounds, despite the different sizes of the things they refer to. *Lilliputian* is a big word meaning "small," but *big* is a small word meaning "large."

Finally, there is no **natural** or **causal** connection between words and their meanings. That is, words and their meanings are not connected in the way that smoke and fire, or explosions and noise, or cars and air pollution, are. We know that fires cause smoke, and so when we see smoke we can assume that there is also fire. The particular sounds of a word do not cause its meanings in this way, nor do the meanings cause the choice of word sounds.

However, all languages have some expressions that are non-arbitrary. They are said to be **motivated** by some factor other than convention. One motivation is similarity between the word sounds and sounds associated with the things the words refer to. Common examples of these are **onomatopoeic** words for animal noises, e.g., *moo*, *bow-wow*, and *quack-quack*. Note that the last two of these suggest that dogs and ducks normally make noises in pairs and that English speakers can distinguish a dog's *bow* from its *wow*. Note however, that an Irish dog goes *amh-amh* and a Serbo-Croatian one goes *av-av*. This suggests that onomatopoeic words are not perfect imitations; at least some conventionality is at work in them. To appreciate the range of ways in which languages represent animal sounds, go to http://www.eleceng.adelaide.

edu.au/personal/dabbott/animal.html

Another type of motivation is **sound symbolism**, the relatively consistent association of certain sounds with certain meanings. For example, the [ee] vowel sounds of *teeny* suggests something small. We find similar uses of similar vowels in other languages. Spanish, for example, uses the suffix *-ito/a* to designate small things and children. However, it can hardly be said that this vowel always carries this diminutive meaning. For example, no hint of smallness appears in words like *beefy*, *treaty*, *keep*, or *heal*. And similarities with other languages may be purely accidental: *-chen* is a diminutive suffix of German, a language more closely related to English than Spanish is.

While it is true that the vast majority of words that consist of just a single meaningful part, e.g., *lamp* and *post* are arbitrarily related to their meanings, combinations of such words frequently are not. That *lamppost* means "lamppost" is motivated by the fact that it consists of *lamp* and *post*.

Exercise

What apparent motivation occurs in the following English words? What words can you think of that don't fit the patterns?

a. slop, slime, slush
b. itsy-bitsy, tinkle, twinkle
c. slip, slink, slide, slither
d. moo, meow, cuckoo

Duality of patterning

This strange phrase means that meaningful linguistic units such as words are composed of discrete units that have no meaning. For example, the word *book* clearly has a meaning; but just as clearly, each of its individual sounds, [b], [oo], and [k], has no meaning. Individual sounds like these can be used to create other words. So languages take one or a combination of meaningless sounds and then assign meanings to them. The expressions of non-human animals, even those with relatively large numbers of expressions, seem not to be designed like this, with the result that their call repertoires cannot be readily expanded.

Displacement

Human language allows human beings to talk about anything, regardless of whether what they talk about is in the immediate context, occurred in the past, will occur in the future, or, indeed, did not, may not, or will not ever occur. This freedom from the here and now is called **displacement**. Non-human

communication is typically tied to the time and place at which it occurs. As a result, we are far better liars than other animals.

A language is distinctively human

This is a remarkably controversial topic. When we speak of language in this book what we have in mind are systems such as English, French, Swahili, or Navajo. However, the word *language* is often used loosely to indicate any means of conveying meaning—e.g., the language of dance, the language of flowers, animal languages. The discipline of **semiotics** developed to study the language-like characteristics of various forms of communication. The range of semiotic (meaningful) systems is great, encompassing natural languages, gestures, spatial relations, animal communication, film, advertising logos, traffic signals, clothing, and many other modes of communication. Much semiotic research draws on linguistic concepts.

Semiotic and other linguistic studies have demonstrated the richness of human communication, but have never uncovered any means of communication superior to human language in the complexity, range, or precision of its meanings. This is not surprising. One could hardly imagine translating the Constitution of the United States into body language or the language of clothing. While semiotics has dramatically enlarged our awareness of the scope of meaningful systems, it has produced no challengers to language either on quantitative or qualitative grounds.

Likewise, research into animal communication has vastly improved our appreciation of the natural communication systems of primates, dolphins, birds, and frogs. But it has presented no rivals to human communication, again either on qualitative or quantitative grounds. A few primates have learned, usually with intensive training, to communicate in language-like ways, through manual signs, plastic symbols, or computers. Their success tells us a good deal about their intelligence (especially of bonobo chimps), but their communicative systems are not equivalent to English or any other human language.

For some people it is not at all surprising that humans have language and animals don't. According to many religions, language was given to humans by a god. For others this topic is intensely controversial. Some claim that our closest animal relatives share some of our linguistic capacities; others insist that there is no continuity between whatever cognition and communication other primates are capable of and human language. (The following items should give you a roller-coaster ride on the research; not all are easy reads: Carstairs-McCarthy, 1999; Gardner, Gardner, and Van Cantfort 1989; Greenfield and Savage-Rumbaugh 1990; Hauser, 1996; Hawkins and Gell-Mann 1992; Hockett, 1960; Lieberman 1984, 1991; Savage-Rumbaugh 1986; Savage-

Rumbaugh and Lewin 1994; Sebeok, 1981; Sebeok and Rosenthal, 1981; Terrace, 1981; Wallman 1992.)

We must add here that all normal human beings can be both producers and receivers of human language, a characteristic known as **reciprocity** or **interchangeability**. In many animal communication systems one sex, usually the male, produces signals while the other merely receives them.

Another perspective on this issue is the relationship between intelligence and language. Assuming (controversially) that IQ provides a reliable index of intelligence, Lenneberg claimed that language abilities are not significantly absent even at dramatically low levels (though he may have overstated the case [Jackendoff 2002: 95 n.13]):

> Children whose I.Q. is 50 at age 12 and about 30 at age 20 are completely in possession of language though their articulation may be poor and an occasional grammatical mistake may occur. (Lenneberg 1964: 41-42)

A language is culturally transmitted

No child comes into the world capable of learning only a specific language or set of languages. All normal children can learn any human language. All they need is appropriate learning situations. Languages are transmitted from one generation to the next by **cultural transmission**, not by genetic transmission, as is the case with many animal communication systems.

Having said that, we must add that without the physiological and neurological bases that language depends on, children would be unable to learn any language. So learning a language depends upon having both the right biological bases and the right learning environment.

Knowledge of a language is unconsciously present in the mind

Consider the following questions:

(1) a. Do you like duckling?
b. Do you like snorkeling?
c. Do you like Kipling?

Without the slightest bit of thought, you know which one of these questions can be answered *Yes, I like to* _____. You know that *snorkel* but not *duckle* or *Kiple* can occur after *I like to* _____. You can tell all of this without any knowledge of grammatical analysis such as that *snorkel* is a verb. And though you may not know terms such as **morpheme** and **di-**

minutive (*-ling* in (1a)), you know that *duckling* and *snorkeling* have two meaningful parts but that *Kipling* has only one. You also know the grammatical form and function of *snorkeling* in (1b), though you might not be able to provide a technical description. (See our chapters on Phrases, Basic Clause Patterns, and Multi-clause Sentences.) Knowing a language, then, is not the same as knowing terminology or being able to articulate grammatical descriptions. Your knowledge of language is unconscious knowledge. No amount of introspection, meditation, psychotherapy, or brain surgery will allow you to access it directly.

The clearest sign of unconscious knowledge is the presence of **linguistic intuitions**—gut feelings about language that we could not have without unconscious linguistic knowledge. These intuitions are not the product of education; totally illiterate people have them. They derive from genetic capacities specific to humans and from having acquired a language. One's unconscious knowledge of language is called **linguistic competence.** We will have more to say about linguistic competence below.

A language consists of rules

Unfortunately, the word *rule* conjures up exactly the wrong image of linguistic knowledge, suggesting the prescriptions of right and wrong that we find in handbooks. Linguists, however, use the word to mean two related ideas. First, *A **rule** is a part of our unconscious knowledge of our language (our linguistic competence). It is a mental pattern about a limited part of a language, e.g., pronunciation, sentence structure, or what a word means.* For instance, English has a basic subject-verb-object word order:

(2) a. [$_{\text{Subject}}$Patti] [$_{\text{Verb}}$plays] [$_{\text{Object}}$the cello].
b. [$_{\text{Subject}}$Michael] [$_{\text{Verb}}$wrote] [$_{\text{Object}}$some fine poetry].

When we produce sentences of this sort, we are acting as if we were following a rule that says: *Put subjects before verbs and verbs before objects*. If we were not following rules, our speech would be chaotic and unintelligible, not the highly patterned, communicative activity it is.

Second, linguists also use the word *rule* to refer to their attempts to formulate these linguistic patterns in words, that is, to the **model** we build of an unconscious mental rule. Our model is not the rule itself, which remains forever inaccessible.

Exercise

1. What rule would you formulate that would allow English speakers to say that sentences a, b, and c are OK, but that d is not? (The symbol * means **ungrammatical**, i.e., not in conformity with the rules of competence.) Feel free to make use of grammatical terminology and also of terms for meanings.

   a. John looked the address up.
   b. John looked it up.
   c. John looked up the address.
   d. *John looked up it.

2. And what rule would you formulate to explain why (a-c) below are grammatical, but (d) is not?

   a. Harry sent a present to Mary.
   b. Harry sent Mary a present.
   c. Harry sent a package to Boston.
   d. *Harry sent Boston a package. (Can you think of a context or a meaning in which this sentence can be grammatical?)

A language is a system

Rules are not distributed randomly in the mind like potatoes in a sack. Rather, they are systematically related to one another. It is easiest to envision this conception with an analogy. A computer system has a set of **components** (central processing unit, monitor, keyboard, speakers, drives of various types) whose overall function is to process information. The components interact with each other; you can, for instance, play a CD while reading your email. The components also contain smaller parts, all of which interact in precise, though limited, ways with each other and with parts of other components.

Language systems likewise have components. The most commonly cited ones are:

- phonetics/phonology
- morphology
- vocabulary
- orthography/spelling/writing
- syntax
- semantics
- pragmatics
- discourse

Phonetics and **phonology** are concerned with the sounds of language, **morphology** with the structure of words, **vocabulary** with our store of words, **orthography** with the spelling system, **syntax** with the principles of sentence structure, **semantics** with the literal meanings of words and sentences, **pragmatics** with the meanings that arise when expressions are used in specific contexts, and **discourse** with the linguistic and rhetorical patterns in texts of various kinds. As we proceed, you will learn the intricate ways in which the system operates.

For the moment, let us look at one concrete example of how the system creates interdependencies among its rules and components. The syntactic rule for yes/no questions is connected to the rules of pronunciation, specifically the rules for intonation, the musical pattern of speech. Listen to the rise and fall of your voice as you say (3a) as a statement of fact and (3b) as a question:

(3) a. They're leaving at 6:00.
b. They're leaving at 6:00?

The order of words stays the same, but the intonation pattern indicates whether the sentence is to be interpreted as a statement or as a question.

In this book, we will begin our discussion with a skeletal overview of English grammar, beginning with the largest grammatical units (sentences) and working down to the smallest (sounds and letters). This is the opposite of our presentation of the grammar in the following chapters. There we begin with the smallest units and work our way up to the largest. We hope that by spiraling in this way, readers who have no background in language study will get an initial orientation, and those who have had some background will get a quick refresher before venturing into greater depth.

COMPETENCE AND PERFORMANCE

As we mentioned, modern linguists distinguish between the knowledge that speakers of a language must have in order to be able to use that language, and the actual use they make of that knowledge to speak, understand, read, or write. Linguists call our unconscious knowledge of the rules that constitute the language **competence**, and our linguistic activities that make use of that knowledge, **performance**.

Performance provides ample evidence of competence. We can use our ability to specify what is and what is not **grammatical** (i.e., consistent with the unconscious rules of our language). Consider the following:

(4) *The blocking the entrance protester was arrested.

Though we can certainly make sense of the sentence, we know that it isn't natural English. (The German translation would be grammatical with this word order.) Of course, we may not be able to articulate exactly what makes the sentence unnatural; nor is it likely that we have been taught anything explicitly about sentences like this.

Likewise, you can determine hidden **grammatical relations**, that is, implicit subjects, objects, and the like:

(5) a. Joan is eager to please.
b. Joan is easy to please.

In (5a), Joan will do the pleasing; in (5b) someone else will please Joan. Such "understood" relations are very common in language.

Finally, you can also perceive **ambiguity** (two or more distinct interpretations):

(6) Molly told Angela about herself.

Here Molly is talking *either* about Molly *or* about Angela.

Exercise

Advertisers often make use of ambiguity, for example, GE's *We bring good things to life*. Find 4-5 other examples of ambiguity in advertising. Express their ambiguous meanings in non-ambiguous sentences. Why do you think advertisers might like ambiguity? How about poets? You might mull over the last line of Dylan Thomas' poem "A refusal to mourn the death, by fire, of a child in London": *After the first death, there is no other.*

The idea of competence depends on certain idealizations. Many linguists, though by no means all, assume that all speakers of a language have the same set of rules in their competence. This is a deliberate simplification, made with full awareness of the variety inherent in natural language. It is done to allow linguists to develop models of competence without being distracted by phenomena that do not appear to affect the model's basic principles. This assumption is not uncontroversial. It has been viewed as an attempt to ignore the social, discourse, and textual functions of language, which some linguists believe to be crucial in understanding language structure. It

has also been viewed, because the majority of linguists are white, male, and middle class, as a thinly disguised attempt to define their variety of English as the basis for the grammatical theory for all languages and all varieties, much as Latin grammar was until recently (and in many situations still is) the model for the grammars of many European languages.

While neither criticism is justified in its extreme version, both point to limitations of the language-as-competence approach. They also point to the need to understand language as a social artifact used by social beings in social contexts for social purposes. We deal with such considerations in our chapters on Variation and Usage in Book II.

A language is acquired

Because many modern theoretical linguists begin from the assumption that what they are modeling is knowledge, it follows that their theories have implications for psychology and ultimately for biology. Many believe that language is a very specialized, perhaps unique, kind of knowledge. They believe that an individual's primary form of language is not acquired in the ways that other kinds of knowledge are acquired, such as writing or arithmetic. In support of this belief, they point out that children learn the language (or languages) of their environments without any instruction or correction from parents or peers. All they need to acquire language is someone to communicate with them. Moreover, they learn a vastly complex system in a very short time, and all create very similar grammars of a given language regardless of the differences in what they hear about them, and (up to a point) regardless of their differences in intelligence.

Most tellingly, linguists point out that when we know a language we know far more than we could have gleaned just from the language we heard around us. Our linguistic competence is far richer in its "depth, variety, and intricacy" (Smith 1999: 41) than the evidence that we used to acquire our languages. For example, English speakers know that sentences like (7a) are ungrammatical while (7b) is fine:

(7) a. *She sang beautifully the song.
    b. She sang the song beautifully.

No child learning English (as opposed to French or Italian) as their native language has to be taught (indeed, no child can be taught) that sentences such as (7a) are ungrammatical. (How would you articulate the rule that (7a) violates and then explain it to a child?) The idea that we know more than we have evidence for is called the **poverty of the stimulus** argument. The difference

between what we know and what we have linguistic evidence for must have come from somewhere. It can only have come from cognitive and brain structures specialized for language acquisition. The linguists who are persuaded by arguments like these hold that human beings do not enter the world as "blank slates," rather, they bring with them **innate ideas** that guide them in acquiring their language(s).

On the basis of these observations, and the similarities between languages, many linguists argue that human beings are genetically endowed with a capacity to acquire languages with particular kinds of rule systems. They argue that linguistic knowledge is of a different type than other knowledge, because it is based on specialized cognitive structures, which in turn appear to be based on specialized brain structures.

In support of this neurobiological claim, linguists point out that first language learning must be accomplished within a "critical period" in a person's life (before the teenage years) if it is to be successful. Moreover, damage to certain parts of the brain, mainly in the left hemisphere, affects people's linguistic abilities, whereas damage to corresponding areas in the right hemisphere need not. Thus the language capacity appears to be (at least partially) localized in the left side of the brain. If this point of view is correct, it explains why, even with intense and specific training, no non-humans (even the most intelligent ones) have ever learned a human language.

In contrast, we must be taught how to write, though we may begin learning it at any age—but generally only after we have already learned a primary form of language.

Exercise

1. What kinds of errors have you observed people make as they learn a second language? Or children as they learn their first language?

2. Find a description of one of the many attempts to teach an ape a human language. Describe the teaching methods and the results. How do they compare to the ways in which children acquire languages? How do these animals' linguistic skills compare with the linguistic skills of ordinary people?

A language is infinite

Our view of language and grammar makes some very important claims about the nature of knowledge, at least of linguistic knowledge. It used to be thought

that all knowledge, whether acquired by a human or a bird, was essentially a matter of habit. One learned to respond in specific ways to particular events, and the strength of the habit was a function of the number of times a particular stimulus and response were associated by the learner. From this point of view, understanding a sentence would be a matter of associating a particular response with it. And learning a language would be a matter of learning just which responses go with which sentences. The process was viewed by behaviorist psychologists as in principle identical to the process by which a laboratory pigeon learns to peck at different colors or shapes.

In 1957 Noam Chomsky published a remarkable little book, *Syntactic Structures*, in which he pointed out that the behaviorist approach to language cannot in principle account for language, its acquisition, or its use. This is because language is vast. In fact, the number of sentences in any language is infinite. So no theory that assumes that language learning is habit-formation can, in principle, explain it. You can demonstrate the vastness of language for yourself in a number of ways.

Select what you believe to be the longest sentence of the language. Once you have your candidate, put the words *I believe that* before it. Now you have created a sentence even longer than the first. This must now be the longest sentence of the language. But even to this we can add *Fred thinks that* to create an even longer sentence. To make an (infinitely) long story short, there is no longest sentence in English or any other natural language. (Although recent reports on the Amazonian language, Pirahã, call this into question [Colapinto 2007: 118-137].) Language allows us, in principle, if not in actuality, to create infinitely long sentences, and consequently to create an infinite number of sentences. We do this by inserting one sentence within another, within another, within another . . . *ad infinitum*. This property of inserting a sentence within a sentence is called **recursion**. It is because natural languages are recursive that they allow for the creation of an infinite number of sentences. All natural human languages have this property. So do all varieties and dialects of all human languages. It follows that all languages and varieties are equal. From a linguist's point of view, the creativity of language is based on its recursiveness.

Exercise

Can you think of a different set of sentences that demonstrates the infinity of language? For example, start with the sentence *The book* ***that I read*** *was interesting* ***because*** **. . .** Expand the bolded parts.

Now, while our sentences may be infinite, our memories are not. Consequently, our knowledge of our language, our competence, cannot be just a set of sentences. It must be a finite set of devices that allow us to create or understand sentences as we need to. Thus we can produce and understand an indefinite number of sentences that we have never heard or uttered before. We do this, partially, by matching what we hear with the rules of language that we keep in our heads.

Exercise

1. Reread several pages of this chapter and list the sentences that you *had* read or heard before reading it the first time. We are confident that your list will be either empty or very short. What does this fact tell you about how you made sense of the sentences that you had never encountered before?

2. Briefly explain and illustrate with at least one appropriate example each of the following concepts:
   a. Metalinguistic meaning
   b. The arbitrariness of the relation between words and their meanings
   c. Linguistic competence
   d. Linguistic performance
   e. The infinity of language

APPROACHES TO THE STUDY OF LANGUAGE

Prescriptive and descriptive viewpoints

Prescriptive grammarians are mainly concerned with the conventions that govern formal, written communication. Their goal is to maintain a standardized variety of a language so that it can function as the variety used for communication by the major domains of a state (such as education, government, commerce, and law), as well as among people separated by great distances, by great cultural differences, and by considerable spans of time. This requires a set of widely accepted conventions that are codified in grammars, dictionaries, and style manuals. These conventions are designed with the goal of ensuring that people using the standard variety will use the same forms in the same ways and with the same meanings, thus presumably

facilitating clear and unambiguous communication. Our Usage chapter addresses prescriptive grammar in more detail.

Descriptive linguists are primarily interested in people's actual linguistic knowledge and behavior—in what they say and how they say it—regardless of whether it conforms to the standard prescriptions. They do not judge it to be correct or incorrect. Generally, they believe that if a community of native speakers of a language consistently speaks or writes in such and such a way, then so be it. That, for the descriptive linguist, is correct, regardless of how prescriptive grammarians view the behavior. Descriptive linguists attempt to put aside their own linguistic prejudices (yes, we all have them) and accept and describe what they observe.

Exercise

Using a usage or style manual, find three expressions (e.g., *We was*) that English speakers frequently use but which the manual claims we shouldn't. What, if any, reasons does the manual give for preferring one expression over others? How valid do you think the reasons are?

To make the differences between these two approaches more concrete, let's consider an example. Consider *who* and *whom*. Handbooks claim that *who* and *whom* should be used as illustrated in (8a-c):

(8) a. Who phoned?
b. To whom did you speak?
c. Whom did you speak to?

However, in ordinary conversation we are unlikely to use *whom* in sentences like (8c) and far more likely to use *who*:

d. Who did you speak to?

Descriptive linguists comparing (8c) with (8d) would note the different forms and that (8c) with *whom* is used in very formal contexts whereas (8d) with *who* is used in less formal ones. (See Baron 1994: 27-8.) They would also note that the *to* associated with *who(m)* is to its left in (8b) but not in (8c) or (8d). From this they would infer that *to* stays to the left of *who(m)* in formal contexts, and in those circumstances, *whom* is required.

Exercise

Many people use *seen* as the past tense form of *see*; for instance, ***I seen him yesterday.*** (i) What would (a) a prescriptive grammarian, and (b) a descriptive linguist say about this form/usage? (ii) What would each say about the people who use this form? (iii) What would each say about the contextual circumstances in which it is used?

Descriptive viewpoints: theoretical, analytic, and applied

The descriptive approach to language encompasses a much wider range of inquiry than just grammar. In the following sections we sketch the spectrum of interests that descriptive linguists have pursued. In so doing, we hope to stimulate your curiosity about topics that will one day inform your own teaching.

Theoretical linguistics

Theoretical linguists take a descriptive attitude, but they want to go beyond merely describing language. Their goals are to understand what they observe and to explain why human languages are as they are. To do this they construct **models** or **theories** of language. Models are portrayals (verbal and visual) of the design of languages. For instance, a model might sketch out a syntactic component that includes several different types of rules, as we'll see in our chapter on Modifications of Basic Clause Patterns. In so doing, theoretical linguists try to formulate general statements about what is possible and what is not possible in the syntax of human languages. For example, a theoretical linguist might try to determine why no human language asks questions by simply reversing the word order of statements.

Theoretical linguists thus can identify some very general principles that govern language. In science, as in many other fields, if a statement follows logically from general principles, then it is regarded as **explained**. In linguistics, if the rules proposed for a language follow logically from general assumptions about the nature of human language, they are regarded as explanations, and the general hypotheses are supported.

Theoretical linguists tend to think of themselves as scientists and of their activities as following the methodologies of science. They observe phenomena, make general statements to describe their observations, hypothesize what else should be true if their generalizations are true, and test whether they were correct. If they are correct, they create more hypotheses and test again. If they are incorrect, they revise their generalizations and hypotheses, and test again. In a sense they want to be wrong. When they find where they are wrong, they can improve their original formulation and account for a wider range of data

than before. Linguistic study, from this point of view, is not a hunt for errors, but rather a dynamic, ongoing, creative task, subject to constant criticism and revision. It is important to understand this, because not to do so leads to several misconceptions.

Language rules from this perspective are not a body of immutable laws or conventions discovered or imposed by scholars. They are reflections of our current understanding of the phenomena of natural language.

It is also important not to see this as an endorsement of the view that "anything goes in English these days." In the last two centuries, linguists have discovered an enormous amount about many individual languages and much about natural language in general. Consequently, particularly since the late 1950s, new understandings about the nature of human beings and the human mind have emerged. These have provided far richer models of how human beings learn, remember, and solve problems than were available before. Furthermore, we have discovered a great deal about the relationships between language, culture, and society. It turns out that we (and other creatures) are far more complex than we had given ourselves (or them) credit for.

Exercise

What implications do you think the scientific study of language might have for psychology, computer science, education, and law?

As we noted, we do not believe that "anything goes" in English, or in any language. Languages and language varieties are rule-governed; if they weren't, we wouldn't be able to understand each other. Some forms are meaningful, grammatical, or acceptable; others are meaningless, ungrammatical, or unacceptable. The status of an expression is judged against the rules that constitute the grammar of the language or variety and the rules of appropriateness of utterances to specific situations. If the grammar cannot assign a meaning to the utterance then it will be either completely or partially **meaningless**. If the utterance is not in accord with the structural rules of the language then it will be **ungrammatical**. If the utterance is inappropriate in a given situation or context, then it is **unacceptable**.

Exercise

Consider these sentences:

a. Colorless green ideas sleep furiously.

b. Rusty old cars deteriorate rapidly.
c. We ate quickly our lunches.
d. Hi Dubya! (To President Bush.)

Are these sentences meaningful? Grammatical? Appropriate (in some context)? Explain your reasoning. (Regarding (a), you might track down Sister Mary Jonathan's poem, "You, Noam Chomsky," when you answer this question.)

Analytic linguistics

Language theorists do not work in a vacuum. Rather, they base their hypotheses on the careful examination of language done either by themselves or by others, including philosophers, psychologists, and sociologists. Linguistic analysis draws upon various theories and their analytic tools to provide a description of the facts and rules of entire languages or of portions of a language. For example, modern traditional grammars, such as the series developed by Randolph Quirk and his colleagues (e.g., Quirk et al. 1985), and the recently published comprehensive *Cambridge Grammar of the English Language* (Huddleston and Pullum 2002) are based primarily on traditional grammatical concepts, but they are influenced by developments in more recent grammatical theories and methods. Many modern grammars (and dictionaries), such as *Cambridge Grammar of English: A Comprehensive Guide*: *Spoken and Written English Grammar and Usage* (Carter and McCarthy 2006) and *Longman Student Grammar of Spoken and Written English* (Biber, Conrad, and Leech 2002), make use of huge databases of spoken and written language (**corpora**) that can be searched with special computer programs (**concordancers**); the sentences and other forms found by these searches can then be used as both data for analysis and for illustration (see Biber et al. 1992; Carter and McCarthy 2006). Authentic data are particularly important for materials designed for second language students of English, as well as for teaching the conventions of various genres to native speakers.

Linguistic analysis extends into many fields. The study of regional variation (**dialectology**) and of social variation (**sociolinguistics**) has contributed much to our awareness of the diversity of English (see our chapter on Variation in Book II). Corpus research has broadened our understanding of first and second language acquisition, as well as of the role of language in psychological, legal, and computer contexts. In education, analytic linguistics has contributed to areas such as syntax, lexicography, usage, reading, writing, and literature. These accomplishments mostly concern the present state of the language, a perspective called **synchronic linguistics**. Analysis also extends to

the historical study of languages, a perspective called **diachronic linguistics**.

Applied linguistics

Applied linguists draw upon theoretical models and analytic work for practical purposes. Computer parsers, artificial intelligence (e.g., speech recognition and synthesis), and machine translation form the computational side of the applied linguistics family. Linguists have been hired as consultants to help in the simplification of legal documents and in documenting the identities of tape-recorded human voices in trials (**forensic linguistics**). They have helped the governments of emerging nations devise writing systems and establish public policies on language (**language planning**). In education, they have provided the bases for methods of language teaching (e.g., foreign languages, including English as a foreign or second language, and bilingual education). And there are linguistic underpinnings to designs for English curricula, ranging from phonics to Whole Language.

In spite of its many contributions, linguistics has not had its full impact on education. Perhaps teachers fear the technicalities of a discipline that claims English study to be a science. Some may see linguistics as a threat to traditional values in teaching. The reason may be that mainstream linguistics is an independent discipline with its own objectives and methods and which has not embraced the poststructuralist and postmodernist approaches adopted in literature and composition studies. This is an ironic turn, because the roots of all of these approaches lie in early twentieth century linguistics. In spite of this divergence of interests, we are convinced that teachers are best served by an understanding of the nature of language and the ways it is approached by linguists.

One of the aims of this book is to initiate you into the linguistic point of view and to provide you with the linguistic literacy that you will need in the contemporary classroom. As we have tried to show in this section, applied work grows out of theoretical and analytical frameworks. Moreover, theoretical and analytic notions can provide us and our students with intellectually stimulating and rewarding classroom activities. Many of the exercises in this book exemplify such activities.

Exercise

1. Go to your college library and visit the language section. Identify three areas that interest you (e.g., child language acquisition, regional dialects) and report on the books available on these subjects. Try to find journals on the topic too and note the types of articles that appear

in them. Consult the ERIC (Educational Resources Information Clearing House) system; you may do so either with hard copy or on a computer. See the ERIC thesaurus of descriptors under the heading "language." For a broader spectrum of research on language, you can consult the LLBA (Linguistics and Language Behavior Abstracts), also on computer or in hard copy. (Note: this exercise is a good way to get started on a course project or paper.)

2. Search the Web for sites dealing with English and other languages. A good starting point is Richard Lederer's website. Just enter "verbivore" on your search engine. The Linguistic Society of America (LSA) website (www.lsadc.org) contains essays on many aspects of language and fields of linguistics. The TESOL (Teachers of English to Speakers of Other Languages) site provides lots of information useful to ESL or EFL teachers. The LINGUIST List provides information on a very broad range of linguistic topics and links to many valuable sites. Report on what you find.

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GLOSSARY

ACCEPTABLE: in accord with *both* descriptive and prescriptive rules. See **GRAMMATICAL, UNACCEPTABLE.**

ACQUISITION OF LANGUAGE: a process by which children develop the rules of competence in their native language; based on genetic predisposition and exposure to language rather than on formal teaching.

AMBIGUITY, AMBIGUOUS: having two or more clearly distinct interpretations.

ANALYTIC (also called **DESCRIPTIVE**) **LINGUISTICS:** that branch of language study that attempts to analyze whole languages or parts of languages, proposing descriptive rules.

APPLIED LINGUISTICS: that branch of language study that (ideally) employs theory and description for practical purposes—e.g., first language teaching, especially composition; second language teaching; translation; language policy; etc.

ARBITRARY, ARBITRARINESS: the idea that languages may associate any meaning with any sounds.

BILINGUAL (also **MULTILINGUAL**): personal or societal use of two or more languages.

CAUSAL: one thing causes another, e.g., exams cause stress.

COMPETENCE: (native) speakers' unconscious knowledge of the rules of their language.

COMPONENTS OF LANGUAGE: the interrelated sub-parts of a model of language, specifically phonology, morphology, orthography, syntax, semantics,

and pragmatics. Each component is made up of rules.

COMPOSITION TEXT: a book designed for teaching the various skills of writing at the junior high, high school and college level; may combine features of prescriptive grammar and conventional rules. Also offers suggestions about the process of writing.

CONVENTION, CONVENTIONAL, CONVENTIONALITY: the idea that the speakers of a language agree on which meanings are associated with which sounds.

CORPUS LINGUISTICS: linguistic analysis based on collections of language data, usually stored as computerized data bases and analyzed by computer programs.

CREATIVITY OF LANGUAGE: the capacity of language to express an infinite number of sentences.

CULTURAL TRANSMISSION: the idea that human beings learn their native language(s) from speakers around them, rather than by being genetically preprogrammed with a language, as is the case with some animals.

DESCRIPTIVE LINGUISTICS: concerned with actual patterns of language and language use.

DIACHRONIC LINGUISTICS: the study of historical change in languages.

DIALECT, DIALECTAL, DIALECTOLOGY: (the study of) regional variation in a language.

DIMINUTIVE: a part of a word indicating smallness or youth, e.g., Bill**y**.

DUALITY OF PATTERNING: the idea that the smallest meaningful linguistic units are composed of reusable, meaningless sounds.

EXPLANATION: linguistic rules that follow logically from general assumptions about the nature of human language are regarded as explanations of the phenomena they describe.

EXPRESSIVE MEANING: meaning that indicates the emotional state of a speaker.

GRAMMAR (DESCRIPTIVE): (1) an overall systematic description of a language, written by a linguist or some other person; (2) the syntactic part (component) of the overall description, describing the systematic rules of sentence structure; (3) linguistic competence, i.e., the unconscious but systematic knowledge of the rules of one's native language (also called "internalized grammar"); (4) the systematic rules in one's linguistic competence that apply to sentence structure.

GRAMMAR (PRESCRIPTIVE): an unsystematic list of language variations with the claim that one of the variants is right/correct/proper and the others are not.

GRAMMAR BOOK: summary of the syntactic structures of a language, including part of speech, word order, sentence structure, and sometimes rules of usage.

GRAMMATICAL (DESCRIPTIVE): (1) in accord with rules of competence; (2) pertaining to linguistic structure.

GRAMMATICAL (PRESCRIPTIVE): in accord with rules of linguistic correctness. See **GRAMMAR (PRESCRIPTIVE)**.

GRAMMATICAL RELATIONS: relationships such as subject, object, or predicate of a sentence.

HANDBOOK OF STYLE: a resource that provides information such as rules of grammatical usage, hints for clarity of expression, and bibliographical formatting.

INFINITY OF LANGUAGE: the capacity of language to express an indefinite number of sentences, as well as an endlessly long sentence. See **CREATIVITY OF LANGUAGE.**

INTERNALIZED GRAMMAR: See **COMPETENCE.**

INTERCHANGEABILITY (RECIPROCITY): the idea that human beings can both produce and receive/understand their language(s).

LANGUAGE: a system of rules, unconsciously present in the mind, that enables humans to relate sounds (also gestures or graphic symbols) and meanings.

LINGUISTIC COMPETENCE: See **COMPETENCE.**

LINGUISTIC INTUITION: the natural sense of grammaticality, ambiguity, and structure in one's native language.

LINGUISTIC MEANING: meaning that arises from semantic and pragmatic factors of an utterance, as a result of a hearer's perceiving a speaker's intention.

MEANINGLESS (DESCRIPTIVE): making no sense.

METALINGUISTIC MEANING: meaning focusing on items of the language system.

MODEL OF LANGUAGE: a linguist's schematic representation of a rule, of a component of language, or of an entire language.

MORPHEME: minimal, meaningful linguistic form.

MORPHOLOGY: linguistic component dealing with the units (**MORPHEMES**) that can be combined to make up words. See chapter on Morphology and Word Structure.

MOTIVATED: having non-arbitrary connections between a sign (e.g., a sequence of sounds) and its meaning.

NATURAL: one thing is associated with another by nature rather than by convention.

OBJECTS OF SENTENCES: parts of the sentence representing the thing(s) affected (direct object) or who receive something or benefit in some way from the situation (indirect object).

ONOMATOPOEIA: a word or phrase whose sound appears to imitate the object(s) it refers to.

PARADOX: a poetic device employing a contradiction that may allow resolution.

PARTS OF SPEECH: categories of words such as nouns, verbs, and adjectives. See chapter on Parts of Speech.

PERFORMANCE: the use of language in specific situations (speaking, writing, listening, reading), subject to interferences such as slips of the tongue, etc.

PERSUASIVE (CONATIVE) MEANING: the intention to get someone to perform an action or believe something.

PHONETICS: study of speech sounds as sounds.

PHONOLOGY: study of speech sounds that distinguish meaningful units in a language.

POETIC MEANING: meanings conveyed through the manner in which a piece of information is expressed.

POVERTY OF THE STIMULUS ARGUMENT: the idea that we know more about our languages than the situations in which we learned them gave us evidence for. This is an important argument for believing that language learning requires substantial help from specialized cognitive and brain structures.

PRAGMATICS: linguistic component dealing with the system of non literal word and sentence meanings in a language. See **SEMANTICS**.

PREDICATE OF A SENTENCE: the phrase that completes a clause or sentence when added to a sentence subject. See chapter on Basic Clause Patterns.

PREPOSITION STRANDING: ending a sentence with a preposition.

PRESCRIPTIVE: ideally, directions for the most generally used formal writing and speaking practices, which help define standard English.

RAPID FADING: the swift disappearance characteristic of speech sounds and manual gestures.

RECIPROCITY: See **INTERCHANGEABILITY**.

RECURSION: a property of competence and of rules by which they repeat themselves, resulting in an infinity of structures.

REFERENTIAL MEANING: meaning concerned with information about the external world or about internal thoughts or beliefs.

REGISTER: words and expressions particular to occupations, hobbies, etc.

RULE OF LANGUAGE (DESCRIPTIVE): (1) the mental representation in competence of some specific regularity in the language; (2) a statement that attempts to describe that representation—i.e., a model of a part of competence.

RULE OF LANGUAGE (PRESCRIPTIVE): a statement that specifies a correct or an incorrect usage.

SEMANTICS: linguistic component dealing with the system of literal meanings of words and sentences. See **PRAGMATICS**.

SEMIOTICS: the study of communicative (sign) systems, including language but also such systems as gestures, spatial relations, animal communication, film, advertising logos, traffic signals, clothing, etc.
SOCIAL (PHATIC) MEANING: meaning that creates and/or maintains social contact between communicators.
SOCIOLINGUISTICS: the study of language variation according to social class, ethnicity, gender, and formality.
SOUND SYMBOLISM: aspects of the pronunciation of words that suggest aspects of their meaning; e.g., the vowel sounds of *teeny* as suggestive of smallness.
STYLE: the choice of expression that reflects contextual factors such as the formality of the situation.
SUBJECT OF A SENTENCE: The phrase that when integrated with a predicate completes a basic clause. See chapter on Basic Clause Patterns.
SYNCHRONIC LINGUISTICS: the study of a language at a particular time, i.e., as abstracted from historical change.
SYNTAX: linguistic component dealing with the system of sentence structure.
TEXT: one or more spoken or written utterances that form a coherent whole.
TEXTUAL MEANING: meaning that derives from utterances put together to form (part of) a text.
THEORETICAL LINGUISTICS: that branch of language study that attempts to specify (1) the nature of language, its acquisition, and its use; and (2) appropriate models and other technical devices used to describe language.
THEORY: general statements based on observation that describe the nature of some domain such as language, partially verified by testing hypotheses that derive logically from the statements, and which explain phenomena in the domain.
UNACCEPTABLE: evoking a negative response for *any reason* whatever; the broadest category of disapproval of language.
UNGRAMMATICAL (DESCRIPTIVE): not in accord with linguistic competence, i.e., not natural, normal, or in agreement with the intuitions of the native speaker.
UNGRAMMATICAL (PRESCRIPTIVE): not in accord with rules of correctness.
USAGE: rules designed to ensure that standard English is used in formal writing and speaking and to make our writings and speeches clear, efficient, and effective, given our purposes in communicating and the characteristics of our audiences.

Answer: The word *bookkeeper* has three double letters in a row.

3 A Skeletal Introduction to English Grammar

KEY CONCEPTS
Clauses
Sentences
Phrases
Complementation and modification
Words
Morphemes
Parts of speech
Regular and irregular forms
Grammatical categories
Sounds and spelling
Form, function, meaning

INTRODUCTION

This chapter has a number of purposes. First, it aims to place the study of grammar within the larger study of discourse and text. Second, it aims to provide a review of traditional grammatical concepts and terminology for those who have studied grammar before. If you have not studied grammar before, it will give a very simple introduction to grammatical ideas and plenty of practice in using those ideas in straightforward exercises. Third, it provides a basis for the deeper and more critical study of language that we present in the remainder of this book and in Book II. In this chapter we only provide examples of concepts; we do not justify those concepts or their application (though we will sketch how to justify analyses in our section on Form, Function, and Meaning). Our goal is to help you get up to speed in recognizing basic grammatical elements. Because the presentation in the following chapters progresses from the smallest units (sounds), and works upward to the largest (sentences), we begin this chapter with the largest units, clauses and sentences, and work downward to the smallest.

We use language to communicate with each other. This communication may occur in conversation, which can be either directly face-to-face or mediated by some technology such as the telephone. We may also communicate by writing to each other. Communication in which language is used is called **discourse** and the products of discourse are called **texts**, which can be recordings of spoken communication or the writings that constitute a written discourse. Discourse is coherent, cohesive, contextualized, and purposeful communicative activity. We will have more to

say about discourse and texts in our chapter on Discourse. The texts that realize a discourse are composed of various kinds of linguistic units, the most important of which is the **sentence**. The sentence is the largest unit to which the grammatical rules of a language apply. **Sentences** are composed of one or more clauses; a **clause** is composed of at least two phrases, one of which plays the role of **subject**, the other, of **predicate**; **phrases** are composed of one or more words functioning as a single grammatical unit; **words** are composed of morphemes; **morphemes** are meaningful sequences of phonemes (units of sound); **phonemes** are the units of sound that distinguish words or morphemes from each other. They are represented more or less adequately by **letters** of the alphabet.

CLAUSES

Because sentences are composed of one or more clauses, we begin with a discussion of the latter. Clauses represent simple states of affairs. These may be states or events. **States** are unchanging situations; **events** are situations in which something changes.

The simplest type of complete clause must have two phrases, one functioning as the subject and the other as the predicate. In the following examples the subject is italicized and the predicate is bolded. Note that both subject and predicate can consist of one or more words:

Squirrels **jump**.
Dogs **chase cats**.
Jack and Jill **ran up the hill**.
A clause **is composed of a subject and a predicate**.
You **should have been there**.
The students **left the room quietly**.
the little lame baloonman **whistled far and wee** (e.e. cummings)
Reality TV **is a crashing bore**.
He **tried to avoid the freighter**.
The author **was born in 1943**.
FDR **was a great leader**.
Their voices **make up the story**.
Husbands **give wives flowers**.
Linguistics **will expand knowledge of language**.
The book **deals with contemporary issues in political ethics**.
Four people **were killed today in a small plane crash in San Diego**.
It **is raining**.
You **know the answers to most of these questions**.

Exercise

1. Put brackets around the complete subject and complete predicate in each of the following clauses. For example, [*All politicians*] [*give speeches*].
(Subject) (Predicate)

a. This section has a number of purposes.
b. We provide copious exercises for you.
c. Sentences stand alone.
d. We begin with easy exercises.
e. Beginning writers leave out parts of sentences.
f. I need a cup of tea.
g. You should try yoga for your nerves.
h. Karate is excellent exercise.
i. The queen may move any distance in any direction.
j. Alice and the March Hare went to the Mad Hatter's tea party.
k. Politicians lie.
l. Politicians tell lies.
m. Our library is rather small.
n. Its collection consists of old books.
o. It is raining heavily.
p. The astronauts sent greetings to the earth-bound.

2. A very simple question: What is the typical order of subject and predicate in English clauses?

Besides occurring before the predicate, subjects are often defined as the phrase that represents something about which something is said by the predicate, or about which the predicate answers a question. For instance, we can view the subjects (italicized) in the following clauses as representing something about which the predicates (bolded) say something or answer a question about the subject. For instance, *What can we say about dogs? They* ***bark***:

Dogs **bark**.
Flannery O'Connor **wrote several books**.
His mother **sent him a care package**.
He **paid an unscrupulous dealer $400,000 for a vintage DB 6**.

Subjects are traditionally viewed as expressions that represent the doer

of the action represented by the verb of the clause. They can often answer the question, *Who did what the predicate describes?* For example, *Who wrote many great plays? Oscar did*. This is true in the following examples:

Donald ate a pizza.
Dick walked the dog.
Peggy went to the concert.

Notice that the subject is the first word or phrase in each of the clauses above. This is often the case, but not always. In the following examples, another phrase precedes the subject. Again, the subjects are italicized:

In the stormy seas, *Jim O'Neill* is doing his best to win a yacht race.
Manipulated by MI6, *O'Neill* is dragged into a bloody confrontation.

Exercise

Identify the subject and predicate in the following clauses.

a. Fortunately, I still have time to prepare for the semester's classes.
b. According to the great majority of atmospheric scientists, the earth is warming alarmingly.
c. Evidently, the globe is in for increasingly extreme weather.
d. Surprisingly, people are not doing very much about this.
e. Hopefully, they will begin adapting soon.

An essential grammatical element in a predicate is its **main verb**. Every complete clause must have one. The italicized words below are the main verbs in their respective clauses:

Tom Foote *went* to sea as a young man.
Welch *chronicles* the family history of the Condons.
The plot *grew* frightening.
Martha *resembles* her mother.
Donald *owns* a Testarossa.
The tank *weighs* over 6,000 pounds.

Traditionally, main verbs are defined as words that denote actions or states of being. The verbs italicized just above fit this definition. Note,

though, that most of them end in *-s* and occur after the subject.

Exercise

Put brackets around the main verb in each of the following clauses. For example, *The cat [escaped] from the house*.

a. This chapter has several purposes.
b. The book provides copious exercises for you.
c. The student appears calm.
d. We begin with easy exercises.
e. Unskilled writers omit parts of sentences.
f. Sentences stand alone.
g. Government mismanagement caused huge losses.
h. She tried yoga for her nerves.
i. The queen moves for any distance in any direction.
j. Alice and the March Hare went to the Mad Hatter's tea party.
k. It rains heavily here.

Some clauses contain phrases that play the role of **object**. Object phrases generally follow the main verb and are part of the predicate. They are italicized in the following examples. Note that object phrases may consist of one or more words:

Dogs chase *cats*.
Tigers eat *meat*.
His military service took *him* around the world.
This collection of photographs captures *the beauty of California's northern coastline*.

Objects are traditionally viewed as the expression denoting the "receiver" of, or the entity directly affected by, the situation represented by the verb. Thus, if the subject represents the agent of the action denoted by the verb, then the subject does whatever is denoted by the verb to whatever is represented by the object. This definition fits all of the examples immediately above.

Exercise

1. Put brackets around the entire object in each of the following sen-

tences. For example, *John Lennon wrote [many great songs].*

a. Oscar ate the hamburger.
b. Akim read his book.
c. The CEO told several lies.
d. Some sentences contain modifiers.
e. Cats like catnip.

2. Very easy question: What is the typical order of subjects, verbs, and objects in English clauses?

Some sentences contain two objects, separated by brackets in the following examples:

a. Frederick sent [*his mother*] [*flowers*] for her birthday.
b. Mathilda gave [*the children*] [*a pumpkin*].
c. The book shows [*its readers*] [*all of the most important monuments*].
d. Dad baked [*the children*] [*a birthday cake*].

Both objects are part of the predicate and follow the main verb in these clauses. The first is the **indirect object**; the second is the **direct object**. Again, note that each can consist of one or more words.

Traditionally, the indirect object is viewed as the phrase that represents the "recipient" of whatever is denoted by the direct object, or the "beneficiary" of whatever situation is denoted by the clause. Thus, *his mother* is the recipient of *flowers* according to (a) above, and *the children* represents the beneficiary of dad's baking in (d).

Exercise

1. Put brackets around both complete objects in each of the following clauses, and indicate which phrase is the direct and which is the indirect object. For example, *She gave [the dog](Indirect) [a bone] (Direct).*

a. We offer all our customers unparalleled values.
b. The store rented them the video.
c. Show me your etchings!
d. Bring my friend another beer!
e. Send the senator a protest letter!

2. Pronouns are words like *I, you, he, she, it, they,* and their relatives *me, your, him, her, its, them,* and the like. Substitute an appropriate pronoun for the italicized phrases in the clauses below. For example, *James Joyce wrote Ulysses and Finnegan's Wake* > *He wrote them*.

a. *Hemingway* admired *Faulkner.*
b. *Navratilova* beat *Evert*.
c. *The women* outnumber *the men.*

Your response to the last exercise should have been:

He admired him.
She beat her.
They outnumber them.

We want you to notice that you chose different pronoun **forms** to replace subject and object phrases. By form we mean the observable grammatical characteristics of expressions, such as their pronunciation (e.g., *compáct*, *cómpact*), what endings they have (e.g., *-ize* on verbs such as *realize*), what endings they may add (e.g., *-s* indicating plural on nouns), where they appear in sentences (e.g., *him* occurs as an object), and what kinds of expressions can substitute for them (e.g., pronouns for noun phrases, *do (so)* for predicates).

Clauses may contain one or more **modifiers**, also called **adverbials** or **adjuncts**, which may take several different grammatical forms and which may occur in several different positions:

Proceed *cautiously*/*with caution*. [Adverbial at end]
Linguists write *slowly*. [Adverbial at end]
Unfortunately, grammarians *frequently* disagree. [Adverbial at beginning and in middle]
One can *easily* find biographies of all the presidents. [Adverbial in middle]
The papers have been *carefully* selected and edited/*with taste*. [Adverbial in middle and at end]
[*In the nineteen twenties*,] [*at the age of fourteen*,] Seamus Murphy began his apprenticeship. [Adverbials at beginning]

Exercise

1. Put brackets around each entire modifier in each of the following

clauses. Where a clause contains more than one modifier, identify the individual ones separately. For example, *[Fortunately], they will [eventually] get well*.

a. Move quickly!
b. At the end of your studies, you'll get a job overseas.
c. Guglielmo Marconi created the radio transmitter despite widespread skepticism.
d. In 1894, Marconi sent a wireless signal more than 1.5 miles.
e. By the end of his life, Marconi had acquired great wealth.

2. In each of the following clauses put brackets around the complete subject, complete object(s), main verb, and the complete expression of any modifiers. Do not identify modifiers within subjects, objects, or other modifiers. For example, *[The astronauts] (Subject) [landed] (Main verb) [their spaceship] (Direct object) [safely] (Modifier)*.

a. The Insectoids landed yesterday.
b. These space travelers reached the planet Armeron.
c. Below the surface, they get a real shock.
d. In this strange world, a powerful new energy source pulses.
e. A few jolts from these Volt Stones supply all their power.
f. Giant insects prowl the planet.
g. To protect themselves, the Insectoids disguise their spaceships.
h. They build a bug-zapping trap. (Adapted from Lego web site)

Besides their main verbs, clauses may also contain **auxiliary** or "**helping**" **verbs**: *be*, *have*, *do*, *can*, *could*, *may*, *might*, *shall*, *should*, *will*, *would*, *must*. These occur before, and in addition to, the main verb:

Sentences *may* contain auxiliary verbs.
Books *are* written by obsessive compulsives.
Do all tigers eat meat?
Would you please close the door?
We *can* offer these books at the special price of $19.95.

A clause may contain several auxiliary verbs (up to four, in fact):

She [*could*] [*be*] lost in the forest.
He [*has*] [*been*] waiting all his life to meet his soul mate.
He [*should*] [*have*] [*been*] spending his time on more important things.

Exercise

1. Identify any auxiliary verb(s) in each of the following clauses. For example, *We [are] expecting rain.*
   a. Oscar is waiting for a train.
   b. Frieda has finished all her homework.
   c. The Insectoids have built a protective shield.
   d. He must be staying for dinner.
   e. She could have been arrested by the TSA officers.

2. Easy question: Where do(es) the auxiliary verb(s) occur relative to the subject and the main verb?

3. Turn each of the clauses (a) through (e) in Exercise (1) just above into a question. For example, *Is Oscar waiting for a train?*

4. What happens to the relative order of subject and auxiliary verb in the creation of these questions?

5. When a clause contains more than one auxiliary verb, which one is affected by the creation of a question? (NB (d) and (e) in Exercise (1).)

The verbs *be*, *have*, and *do* may be either auxiliary or main verbs. If one of them is the only or the last verb in a clause, then it is a main verb:

The concert *was* a great success.
The Insectoids *have* a new power source.
John *did* the dishes.
The reading series has *been* wonderful.
Frieda has already *had* her lunch.
Oscar is *doing* his homework.
The kid may be *doing* poorly at school.
She should still *be* in the library.

Clause types

At this point we will distinguish seven types of clauses. We begin with the **voice** distinction between **active** and **passive** versions of sentences. Sentence (a) is active and (b) is its passive version:

a. Richard Dawkins wrote *A Devil's Chaplain*.

b. *A Devil's Chaplain* was written by Richard Dawkins.

Note that the passive version has a form of *be* (*was*) as an auxiliary verb and a phrase beginning with *by*. Note also that the subject of the passive (*A Devil's Chaplain*) corresponds to the object of the active, and that the object of *by*, (*Richard Dawkins*) corresponds to the subject of the active.

The *by* phrase is optional; it can often be omitted without reducing the sentence to a fragment:

c. Someone has abandoned this car.
d. This car has been abandoned.

We distinguish three sentence types according to different **moods**: the declarative, the interrogative, and the imperative. Sentences (a) through (f) are **declarative** (a.k.a. **indicative**):

e. John should be here soon.
f. Fred left early.

Note that the subject of (e), *John*, is before the auxiliary verb *should*, and in (f) the subject *Fred* is before the main verb *left*. Declarative sentences are typically used to make assertions, although like all sentence types, they can be used for several purposes.

Imperative sentences contain neither a subject nor an auxiliary verb:

g. Get up!
h. Stop that!

Imperative sentences are typically used to give orders, directions, and instructions. For instance, the instructions in cookbooks are typically written in the imperative: *Mix the chopped apple with the other ingredients and pour into greased pan*.

There are two main types of **interrogative** sentences, **Yes/No interrogatives** (so called because they are used when a *yes* or *no* answer is expected), and **Wh-** or **Information interrogatives**, which are used when a more elaborate answer than just *yes* or *no* is expected. Sentence (i) is a Yes/No interrogative. Note that its auxiliary verb *will* comes before its subject, *John*:

i. Will John be here soon?

Remember that when a sentence contains more than one auxiliary verb, it is the first of these that moves to the left of the subject:

j. Will John be leaving soon?

(k) is a Wh-interrogative. It begins with *what* and its auxiliary verb, *should*, occurs before its subject, *you*:

k. What should you be doing now?

A clause's **polarity** has to do with whether it is **positive** or **negative.** Examples (a-k) are all positive. Negative clauses are created by placing *not* after the first auxiliary, *should* in (l):

l. You should not be sleeping here.

The first auxiliary and *not* can be contracted into a single word:

m. You *shouldn't* be sleeping here.

Negative sentences may be declarative, like (l) and (m). They can also be interrogative:

n. Shouldn't you be sleeping over there?

And imperative:

o. Don't touch me!

Note the appearance of *don't* in the negative imperative.

And (p) is both negative and passive:

p. Rome wasn't built in a day.

Exercise

For each of the following sentences say whether it is (i) active or passive; (ii) declarative, interrogative, or imperative; and (iii) positive or negative. For example, *Couldn't it have been left behind? Passive, in-*

terrogative, negative.

a. House Republicans have a new leader.
b. Can I borrow your mulcher?
c. Call us at 555-3232.
d. Heroic leadership is not required.
e. Children from Jamaica have been barred from the National Spelling Bee.
f. Jody-Anne was the first Jamaican winner.
g. Buy more, save more.
h. Was the case made well enough by House managers for a conviction?
i. Area hospitals have been warned of mislabeled drugs.

SENTENCES

In written English and other familiar languages, sentences are quite easy to recognize: they typically begin with a capital letter and end with a period or its equivalent. From a linguistic point of view, sentences are the largest grammatical units. They are also intuitively complete in two senses: first, they may stand alone as informative units, and second, and more importantly, they include all required grammatical elements. This paragraph is composed of sentences, and each of the following is a sentence:

Cats purr.
Tigers eat meat.
Some birds cannot fly.
Journalists think that they do important work.
Bill Gates is fighting for the rights of all capitalists.
If wishes were cars, I'd drive a Ferrari.

Language learners and beginning writers commonly leave out parts of sentences, creating **fragments**, like:

Cats.
Meat.
Fly.
That they do important work.
For the rights of all capitalists.
If wishes were cars.

Some fragments may be perfectly appropriate in certain contexts, for example, as answers to questions:

What animals purr? *Cats*.
What do tigers eat? *Meat*.
What is Bill Gates fighting for? *For the rights of all capitalists*.

Exercise

For each expression below, say whether it is a sentence or a fragment. Explain how you decided. For example, *Lipitor reduces the risk of stroke*. (Sentence because it includes both subject [*Lipitor*] and predicate [*reduces the risk of stroke*]). *About Lipitor.* (Fragment because it has no main verb and therefore no subject and predicate).

a. The Jacket has a fully adjustable hood.
b. All seams are tape-sealed.
c. Fully waterproof, full of features.
d. Breathable Nylon Rainwear—lightweight, packable, affordable.
e. That is Land's End Rainwear.
f. Both the Jacket and Pants come with a stuff sack.
g. Sized to fit over light layers.
h. The Pants have a full mesh lining, an elastic waist with drawcord, two side pockets, and side ankle zips.
i. Imported.

(Adapted from Land's End Catalog The Real Stuff February 1999, p. 49.)

Sentences come in a variety of shapes and sizes. Some consist of only a single clause. That is, they are **simple sentences** and have only one main verb, one subject, and one predicate, though they may include modifiers of various sorts. A useful way to begin identifying clauses in sentences is to count main verbs. For each main verb there will be a clause.

Linguists write slowly.
Dogs chase cats.
Peter O'Neill is missing.
Cyclists should always wear bike helmets.

Other sentences are **coordinate** (a.k.a. **compound**) because they combine two or more clauses or smaller sentences within them by connecting them with *and*, *but*, or *or*:

[Dogs chase cats] *but* [cats chase mice].
[Elizabeth Bowen lived between England and Ireland all her life] *and* [her death marked the end of the Anglo-Irish literary tradition].

Complex sentences also contain two or more clauses, but at least one of them is **subordinate** to another in the sense that it plays a grammatical role such as subject, object, or modifier in the larger sentence. Clauses that function as objects are often referred to as **complement clauses**. In the following examples the subordinate sentence is italicized and its role is given in parentheses:

That this is a witty and entertaining book does not justify its high price. (Subject)
Oscar thinks *that Lady Bracknell is a fine creation*. (Object/Complement)
To improve your stamina, jog five miles every day. (Modifier)
I read your short story, *although you asked me not to*. (Modifier)
While researching the history of the castle, Robertson unearthed one of the great scandals of twentieth century Scotland. (Modifier)
If you think carefully about it, language is extraordinarily complex. (Modifier)
When you leave, shut the door behind you. (Modifier)

Exercise

1. For each of the following sentences say whether it is simple, compound/coordinate, or complex. For example, *Tony was eating dinner when the police barged in*. Complex because it contains a main clause (*Tony was eating dinner*) and a subordinate clause (*when the police barged in*).

a. A nice seasonal note emerged from the Vatican.
b. Three of the curia's computers are known as Raphael, Michael, and Gabriel.
c. Raphael maintains what is known as a firewall and it protects the Pope's website from hackers.
d. We thank you for your custom throughout 2002 and we look forward to your patronage again in 2003.

2. Put brackets around the entire subordinate clause in each of the following sentences. For example, *[When he died in 2005,] Wilson had just finished his play "Radio Golf."*

a. Journalists think that they do important work.
b. John has read two books since he woke up.
c. That Fred would do such a thing is very surprising.
d. If wishes were cars, I would drive a Ferrari.

3. Put brackets around the entire subordinate clause(s) in each of the following sentences, and for each one you identify, say whether it functions as a subject, object/complement, or modifier. For example, *You might think [that they had other things on their minds] (Object/complement)*.

a. When you fly long distances, you get jet lag.
b. Many people believe that politicians are dishonest.
c. That she is late is extremely distressing.
d. If I had enough money, I would buy myself the latest David Brown automobile.

The term **clause** is used to refer to simple sentences. It is also used to refer to sentences within larger sentences. We refer to the clause that all other clauses are subordinate to as the **main clause**. So we can speak of main, subordinate, and coordinate clauses in sentences. *Would you marry me anyway* is the main clause of the sentence *If I were a carpenter and you were a lady, would you marry me anyway?*

Exercise

In each of the following examples, put brackets around each clause and then say for each whether it is a main clause, a subordinate clause, or a coordinate clause. For example, *[Linguists believe] (Main clause) [that they understand the nature of language pretty well] (Subordinate clause)*.

a. Journalists think that they do important work.
b. If wishes were cars, I'd drive a Ferrari.
c. Cats purr and tigers eat meat.
d. When you arrive, call us.

Some sentences include both coordinate and subordinate clauses. These are called **compound/complex** sentences:

[$_{S1}$ *When he's good*, he's very, very good] but [$_{S2}$ *when he's bad*, he's horrid]

In this example, *but* coordinates S1 and S2, however, S1 and S2 each contain a modifying subordinate clause beginning with *when* (italicized).

Exercise

In each of the following examples, put brackets around each clause and then say whether it is a main clause, a subordinate clause, or a coordinate clause. For example, *[Mahogony Gamble says] (Main clause) [that membership has exploded] (Subordinate clause) and [that many new members are from non-Buddhist families] (Subordinate clause)*—the two subordinate clauses are coordinated/conjoined by *and*.

a. Biologists believe that tigers can swim and that dodoes are extinct.
b. If it rains and the weather gets cold, we won't go for our hike.
c. Susan felt pretty bad, but when she went to the doctor, he couldn't find anything wrong with her.
d. Although the house is Wi-Fi, the laptop can't access the internet unless the main PC is also logged on.

PHRASES

Phrases are grammatical units composed of one or more words that function as unified parts of clauses. They are traditionally viewed as not containing both a subject and a predicate, e.g., *this old house*, *the Sopranos*, *crime scene investigator, should do important work, in a balloon, very wicked*, are all phrases. But *this old* and *should do important* are not complete phrases.

Exercise

For each of the following items say whether it is a phrase, a sentence, or a clause. For example, *Wherever you go, you can now email (Sentence)*; *At your service (Phrase)*; *that the clock isn't correct (Clause)*.

a. A Christmas story from Belfast.
b. At 30,000 feet.
c. Extraordinarily beautiful.

d. Come out with your hands up!
e. The administration should have performed better.
f. Question:
g. What do you call a group of chess grand masters who are bragging to each other in a hotel lobby?
h. Answer:
i. Chess nuts boasting in an open foyer.

Phrases are constructed around a **head word**, that is, the main word of the phrase. This may be the only word in the phrase, like *Cats* and *purr* in *Cats purr*. Phrases may also include modifiers, objects/complements.

the café (Head: café, Modifier: the)
the all-night café (Head: café, Modifiers: the, all-night)
in the all-night café (Head: in, Object/Complement: the all-night café)
the old man in the all-night café (Head: man, Modifiers: the, old, in the all-night café)
important work (Head: work, Modifier: important)
do important work (Head: do, Object/Complement: important work)
the wood-shed (Head: wood-shed, Modifier: the)
to the wood-shed (Head: to, Object/Complement: the wood-shed)

Exercise

For each of the following phrases, mark the head word with H, any modifiers with M, and any objects/complements with O. Make sure to identify the entire expression in each instance.
For example, *[The] [cat] [in the hat].*
(M) (H) (M)

a. Happy Christmas
b. a steep hill
c. the experts in the government
d. a meeting in the new conference room
e. free appraisal
f. the only word in the phrase
g. celebrating our 20th anniversary
h. to the mountains

COMPLEMENTATION AND MODIFICATION

Words, phrases, and sentences play several roles in language, two of which are complementation and modification. We have already seen these roles in examples, but have not discussed them *per se*. We will do that here.

Complementation

When one element in an expression creates the expectation that another expression will also occur, the expected element **complements** (i.e., completes) the expecting element. (Note the spelling—*compl**e**ments* not *compl**i**ments*.) For example, a preposition like *on* requires a phrase denoting notions such as location or time, as in *on the pavement*, *on time*, *on your mark*; and a verb such as *buy* requires a phrase denoting something bought, as in *buy lunch*.

Exercise

Identify the entire complement phrase in each of the following expressions. For example, *to [the store]*:

a. for better or worse
b. keep the change
c. during the storm
d. sell your car
e. at an important juncture

Modification

A word alone denotes an entire class of things, for example, *motorcycle* denotes the entire class of things we call motorcycles. When one expression is modified by another, then, generally the two expressions together denote only a subset of the things denoted by the unmodified expression. For example, in the phrase, *Harley-Davidson motorcycles*, the head, *motorcycles*, is modified by *Harley-Davidson*, and consequently the whole phrase denotes just those motorcycles that are Harley-Davidsons.

Phrases may include many modifiers, as in *tall, black, neutered, male, domestic, short-haired cat*. Here we have six modifiers each restricting the potential reference of the word *cat*. The result of piling on these modifiers is that the referent of the phrase must satisfy all of them—it must be a cat that is tall, black, neutered, male, domestic, and short-haired. Each modifier acts like a criterion that the ultimate referent(s) of the phrase must satisfy.

Notice that modifiers are not required or implied by the expressions

they modify. These expressions would be grammatically complete without the modifiers—though of course adding or removing modifiers affects the meaning and consequently the referents of the modified expressions.

Exercise

Identify the modifier(s) in each of the following expressions. For example, *[an] [excellent] wine*:

a. expensive tastes
b. barely awake
c. drive quickly
d. someone special
e. little lame baloonman (e.e. cummings)

WORDS

Words are the units from which phrases are constructed. In ordinary written English they are generally separated from each other by spaces. All the items separated by spaces in this paragraph are words.

Words can be created in a number of ways. Some, like *cat*, are internally quite simple. Others are created by combining two or more words together to create another word. For example, *rainfall* is composed of *rain* and *fall*; all three are separate words. Words created in this way are called **compounds** or **compound words**.

Exercise

The following are compound words. Note that some are spelled without internal spaces, some with hyphens, and some with internal spaces, separating their constituent words. Separate them into their component words. For example, *Peace Corps* consists of *Peace* and *Corps*. (This is an extremely easy exercise. It is designed to get you accustomed to thinking about the various spelling formats for compounds words.)

boy-friend, fishing rod, holding pattern, pickpocket, kill-joy, nose-dive, make-believe, fast-food, software, now generation, put-down, drawback, son-in-law, forget-me-not, carbon-date, color-code, test-market, free-associate, double-book, overbook, overeducate, bad-mouth, childproof, leadfree, fail-safe, ready-made, over-qualified. (L. Bauer 1983 pp. 202-213).

MORPHEMES

Words may be constructed from one or more morphemes. **Morphemes** are the smallest forms (i.e., spoken and/or written units) in a language that have meanings or grammatical functions. (Note: they are not the smallest units of meaning.) *Cat* is a word consisting of one morpheme, *cat*. *Cats* consists of two morphemes, *cat* and *-s*. *Inactive* contains three: *in-*, *act*, and *-ive*.

From the point of view of their functions in words, morphemes may be divided into three classes: **derivational**, **inflectional**, and **root**. Adding a derivational morpheme to a word or to another morpheme creates a separate, though related, word. For example, adding the derivational morpheme *–er* to the word *read* creates the word *reader*. In the following examples, the derivational morphemes are in bold: *man-**hood***, *king-**dom***, *act-**or***, ***anti**-thet-**ic-al***, *act-**ive***, ***re**-act-**or***, *act-**iv-ate***, *wise-**ly***. Notice that there may be several derivational morphemes in a word.

While adding derivational morphemes to a root or word creates a separate word, adding an **inflectional morpheme** merely creates a modified version of the word to which it is added. Inflections are added to words to indicate such things as plural, past tense, or comparison. They are bolded in the following examples: *paint-**ed***, *book-**s***, *small-**er***. Modern English uses only eight inflectional morphemes:

-s plural of nouns: *coat**s***
-'s genitive of noun phrases: *Harry**'s,** the kid next door**'s***
-er comparative of short adjectives and adverbs: *fast**er***
-est superlative of short adjectives and adverbs: *fast**est***
-s third person, singular, present tense of verbs: *sleep**s***
-ed regular past tense of verbs: *point**ed***
-ing progressive marker on verbs (occurs with *be*): *is eat**ing***
-ed/-en past participle marker of verbs (occurs with *have* and passive *be*): *has eat**en,** has ask**ed,** was challeng**ed***

The **root** morpheme of a word is the morpheme left over when all derivational and inflectional morphemes have been removed. Thus, *seem* is what remains when we remove the derivational morphemes {-ing} and {-ly} from *seemingly*, and must therefore be its root.

If an inflectional morpheme occurs in an English word, it will always follow the root and any derivational morphemes, as in:

tele-phon-ist-s
D R D I

A morpheme attached before the root of a word is said to be **prefixed**; a morpheme attached after the root of a word is said to be **suffixed**.

"Word" is ambiguous. On one meaning, *phone* and *phones* would be two separate words, but on another meaning, they would be different versions of the same word. We can eliminate the ambiguity with a little lexical ingenuity. We'll say that the inflected forms of a word are **word forms**, and we'll call the word that they are inflected forms of a **lexeme**. This implies that derivationally related words are different lexemes.

Exercise

1. The expressions listed below are derived words. Identify their roots with R and the derivational morphemes with D. For example, *[fail] (R) [ure] (D); [de] (D) [act] (R) [iv] (D) [ate] (D).*

leadership, heroic, national, statement, music, musical, legal, legality, legislator, customizing, setting, enable, disable, disability.

2. Identify the individual morphemes in the following words. Mark roots with R, derivational morphemes with D, and inflectional morphemes with I. For example, *[person] (R) [al] (D) [s] (I).*

telephonic, dusted, repainted, leaders, expectations, surprises, believers, waiting.

PARTS OF SPEECH

Words can be grouped into **parts of speech** or **word classes**. Traditional grammars of English and other western European languages usually recognize eight such classes: **nouns**, **verbs**, **adjectives**, **adverbs**, **prepositions**, **pronouns**, **articles**, and **conjunctions**. Some add a ninth, **interjections**, though strictly speaking, this is a use made of many different types of expressions, and not a part of speech at all.

The parts of speech may be gathered into two groups, the **lexical** (a.k.a. **major**) word classes (nouns, verbs, adjectives, adverbs) and the **grammatical** (a.k.a. **minor**) word classes (prepositions, pronouns, articles, conjunctions). Lexical words are an **open** class in the sense that new words may be added fairly freely. The grammatical classes are **closed**, meaning that it is harder to add new members to them. The lexical class words also convey the main meaning elements of sentences, whereas the grammatical classes tend to perform grammatical functions such as relating expressions to each other: for example, *of* relates *the class* to *top* in *top of the class*. The meanings

associated with grammatical words are often referred to as **grammatical meanings** to distinguish them from the **lexical meanings** associated with lexical words.

The **noun** class includes such words as *book*, *coat*, *dog*, *human*, *milk*, *freedom*. Nouns are traditionally viewed as words that denote persons, places, ideas, and things.

Verbs include words such as *eat*, *leave*, *know*, *be*, *have*, *own*, *cough*. They are traditionally viewed as words that denote actions and states of being.

Adjectives include words such as *old*, *wise*, *red*, *attractive*, *friendly*. They denote qualities and are traditionally defined as words that modify nouns.

Adverbs include *wisely*, *attractively*, *regretfully*, *rapidly*, *wildly*, *knowledgeably*, *frequently*. They are traditionally defined as words that modify verbs, though they also modify adjectives, adverbs, and sentences.

Prepositions include *up*, *to*, *toward*, *along*, *by*, *with*, *onto*. These denote direction, instrumentality, and a number of other such notions.

The **conjunctions** divide into two classes: **coordinating** (*and*, *but*, *or*) and **subordinating** (*that*, *if*). Conjunctions join expressions to each other in various ways.

Pronouns divide into several subtypes, of which we'll mention only one here: p**ersonal pronouns** (*I*, *you*, *he*, *she*, *it*, *they* and their variant forms).

Wh-words include *who*, *whom, whose*, *what*, *when*, *where*, *why*, *how*.

English uses two types of **article**: **definite** (*the*) and **indefinite** (*a*). Other languages may use one (Irish) or none (Latin).

Auxiliary verbs include *be*, *have*, *do* and the **modal auxiliaries**: *will*, *would*, *can*, *could*, *shall*, *should*, *may*, *might*, *must*.

We will critically review the traditional definitions of these word classes in our chapters on Major and Minor Parts of speech.

Exercise

Using the descriptions and lists just above, identify the part of speech of each of the following words. For example, *songbird (noun)*.

may, an, whose, her, but, if, from, strangely, strange, write, writer, octopus, the, their, must, indefinitely, because, mysterious, wander, how.

REGULAR AND IRREGULAR FORMS

Regular forms are those that follow the general patterns of the language; irregular forms are those that do not. Regular English nouns are marked

for plural by the addition of *-(e)s*: *book*, *books*; *class*, *classes*. Irregular nouns have numerous plural forms: *child, children*; *mouse*, *mice*; *man*, *men*; *alumna*, *alumnae*; *cherub*, *cherubim*. Some of these irregulars derive from historically earlier regular patterns: *ox*, *oxen*; others are due to the effects of borrowing: *corpus*, *corpora*; *datum*, *data*.

Regular verbs form their past tense and past participle forms by adding *-(e)d*: *kiss*, *kissed*; *owe*, *owed*. Irregular verb forms generally derive from earlier English patterns: *ring*, *rang*, *rung*; *buy*, *bought*; *dive*, *dove*.

Exercise

Give five more examples of irregular nouns and verbs.

GRAMMATICAL CATEGORIES

We have already mentioned the grammatical categories of plural, tense, person, voice, mood, and polarity. A fuller list of grammatical categories, their meanings, and further examples includes:

Number (whether one or more than one entity is being referred to):
singular (*book*) and plural (*books*)
(relevant to nouns, pronouns, verbs)

Gender (whether the entity or entities being referred to are male, female, or neither): masculine (*he*), feminine (*she*), neuter (*it*)
(relevant to pronouns, nouns)

Person (whether the speaker, addressee, or some other entity is being referred to): first (*I*), second (*you*), third (*they*)
(relevant to pronouns and verbs)

Case (whether the pronoun or noun is the subject, object, or modifier in its clause): nominative (*I*), objective (*me*), genitive (*my*, *mine*)
(relevant to pronouns, nouns, and noun phrases)

Tense (whether the past, the present, or the future is being referred to): present (*kiss/es*, *drive/s*), past (*kissed*, *drove*), future (*will kiss*; *may drive*)
(relevant to verbs)

Aspect (the name given to linguistic forms that indicate characteristics of situations such as whether they are spread out over a period of time, i.e., progressive, or completed but still relevant, i.e., perfect):
progressive (*is kissing*)
perfect (*has eaten*)
(relevant to verbs)

Voice (whether the subject of a clause represents the entity responsible for the event, i.e., active, or affected by it, i.e., passive):
active (*We have eliminated polio.*)
passive (*Polio has been eliminated.*)
(relevant to whole clauses)

Mood (having to do with the kinds of clauses typically used to make statements, ask questions, or give orders/directions):
indicative (*The snows have melted.*)
interrogative (*Have you ever been to Europe?*)
imperative (*Take out the garbage!*)
(relevant to whole sentences)

Polarity (whether a clause is positive or negative):
positive (*The package arrived.*)
negative (*The package didn't arrive.*)
(relevant to whole clauses)

Exercise

1. For each of the following words identify its number, gender, person, and case, where relevant. For example, *he: singular, masculine, third person, nominative/subject case*.

its, Mary's, she, him.

2. For each of the following clauses identify its tense, aspect, voice, mood, and polarity, where relevant. For instance, *She hasn't been seen by anyone since last Friday: present, perfect, passive, indicative, negative*.

a. We will be arriving late tonight.
b. Ahmed is staying with us till Sunday.
c. Fritz overstayed his welcome.
d. Is James in his study?
e. Enjoy yourselves!
f. Don't leave home without it!
g. Hasn't Oscar been arrested yet?

SOUNDS AND SPELLING

Sounds and spelling must be kept conceptually distinct. We should always be clear about whether we are discussing sounds or letters. Long before anyone wrote, people spoke to each other. When we learned our first language,

we learned the spoken version before we learned the written one. When we learned to read and write, we probably learned to associate letters with sounds, first one letter to a sound (and vice versa). For example, we learned to use the letter <s> to represent its most typical hissing sound, [s]. Later we learned that many letters are associated with several sounds (and vice versa). For example, <c> sometimes represents the sound typically associated with <s>, as in *city*, and sometimes the sound typically associated with <k>, as in *cat*, and sometimes both, as in *electric* [k] and *electricity* [s].

Sounds are more basic to language than letters; letters represent sounds, not the other way around. Having said that, however, we must also acknowledge that in highly literate societies such as ours, the written version of language has more prestige than the spoken version—because it is generally associated with more prestigious functions. We are so literate that even when we are required to pay attention to the sounds of our languages, we are strongly influenced by how they are spelled; we tend to "see" sounds rather than to hear them. We hope that our chapter on Phonetics and Phonology will redress that imbalance.

Letters, as we mentioned, are visual symbols for sounds. English has approximately 40 sounds that it uses to distinguish words from each other. If we were to design an ideal writing system for a language like English, we might consider associating each significant sound with a single letter. However, our letters derive from Latin, which got them from Etruscan, which got them from Greek, which got them from Phoenician, so they've been around the block quite a bit and don't fit the language very consistently. There are only 26 of them to represent the 40 or so sounds. This disparity is particularly acute among the vowels, for which we have just 6 symbols (counting <y>) to represent about a dozen different vowel sounds. <i> does at least double duty; it represents different sounds in *bit* and *bite*, (the "silent <e>" alerts us to the difference). And many sounds are represented in several ways: the sound [f], as in *father*, may be represented by the letters <f> in *frankly*, <ph> in *physics*, and <gh> in *enough*.

While the letters themselves came to English (and other European languages) from Latin, English "borrowed" lots of words from lots of other languages, often keeping a version of the original language's spelling. The result is that the way we spell particular sounds often depends on the word the sound is in and where that word came from. For example, the sound [f] is written as the letter <f> in native English words such as *feather* and *finger*. However, the same sound is spelled <ph> in many words that were borrowed into English from Greek, such as *phone* or *Philadelphia*.

The sounds used to distinguish words from each other in a language are

called **phonemes**: [p] and [b] distinguish *pat* and *bat* so they are English phonemes.

But phonemes are pronounced differently in different contexts. If you listen carefully, you will notice that the [p] of *pat* differs from the [p] of *spat*. The former [p] is considerably breathier than the latter. The different pronunciations of a phoneme are its **allophones**. The pronunciation differences among the allophones of a phoneme do not distinguish among words in a language. For instance, there is no pair of separate English words which are identical except that where one member of the pair has breathy [p] where the other has non-breathy [p].

Exercise

Identify three more instances in which English spells a single sound in more than one way and three more instances in which an English letter or group of letters represents more than one sound.

FORM, FUNCTION, AND MEANING

Our discussion has depended on concepts that we must now discuss somewhat more fully. These are the notions of **form** (observable grammatical characteristics), **function** (role or relation in an expression), and **meaning** (what an expression denotes or refers to; the information encoded by an expression).

Form

The notion of **form** refers to the observable elements that make an object what it is. A toothbrush, for instance, has the formal features of a 5"–6" long narrow handle with a bunch of bristles at one end. Individual toothbrushes might have other formal characteristics such as a particular color, particular stiffness of bristles, devices for massaging the gums, etc., but only the first two formal features must be present for something to be identified as a toothbrush.

In grammar, we make use of formal features to identify the category that an expression belongs to. In the study of parts of speech, for example, the form of a word comprises its observable linguistic properties. Besides whether it is spoken, gestured, or written, these formal features include:

a. Actual and potential inflectional elements, e.g., look**s**, look**ed**, look**ing**
b. Actually occurring derivational elements, e.g., good**ness**, goalkeep**er**

c. Stress (emphasis), e.g., cómpact, compáct
d. Potential position in grammatical structures, e.g., adjectives may occur before the nouns they modify
e. Potential for grammatical operations such as substitution, e.g., *the woman* may be "replaced" by the pronoun *she* in a sentence.

These features serve as the basic criteria for identifying parts of speech. For instance, consider how we might assign the word *realize* to the class of verbs. First, it has the potential to accept inflectional endings typical of verbs: *realize**s***, *realize**d***, *realiz**ing***. It also ends in the verb-creating ending *-ize*. The word can occur after other words commonly associated with verbs: *will realize*, *has realized*, *to realize*. Finally, it can be replaced (along with its associated elements) by the form *do (so)(too)*, as in *She realized that "The Simpsons" was more than just a cartoon, and **so did** he.*

Note that in this example not all of the criteria are useful. Stress tells us little about the part of speech of *realize*. But in words such as *convért* (verb) and *cónvert* (noun), stress provides a useful clue. Much of the skill involved in linguistic analysis requires the use of appropriate formal tests. Applying them shows that:

a. Any word is potentially a member of several different parts of speech, e.g., *hit* can be both a noun and a verb.
b. The meaning of a word provides no reliable clue to its part of speech, e.g., verbs are often characterized as words that denote actions or states, but the words *actions* and *states* are both nouns.
c. Distinguishing the formal properties of words is a necessary preliminary to assigning them to a class.
d. Formal criteria apply in different ways to different words. In the case of *realize*, inflectional and derivational clues were available; in the case of *convert*, stress information was available. But for a word such as *since*, we would have had to rely on its potential positions in sentences.

Function

The functional view of language asks, "What is an expression's role in its sentence?" For an analogy, let's return to our toothbrush. Generally, one uses a toothbrush to clean one's teeth. In language, **function** designates the role that an expression plays in a larger unit, in particular, the **relationship** of the expression in question to other expressions in the larger unit. Table 1 identifies the main functions used in this text.

Subject	Predicate
Direct Object	Indirect Object
Object of Preposition	Complement
Modifier	Head

TABLE 1. MAJOR GRAMMATICAL FUNCTIONS

The modifier-head relation may exist between many different pairs of parts of speech. For example (the head word appears in italics):

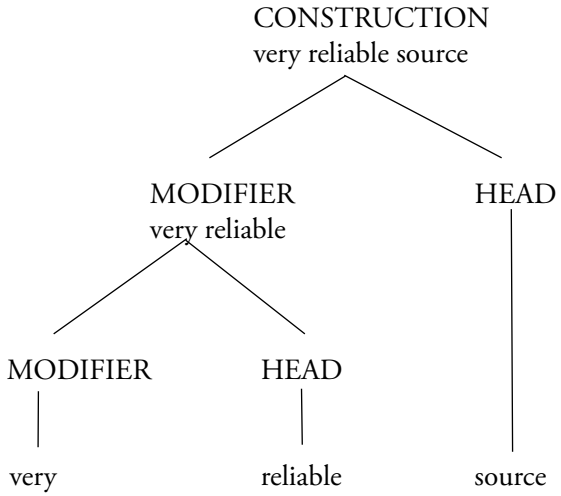
a. reliable *source* (Adjective—Noun)
b. *something* strange (Noun—Adjective)
c. *ran* swiftly (Verb—Adverb)
d. cautiously *approached* (Adverb—Verb)
e. very *reliable* (Intensifier—Adjective)
f. very *cautiously* (Intensifier—Adverb)

A **head word** serves as the main element of the construction that contains it; **modifiers** qualify a head. The head is thus the "syntactic center" of the construction. If the head changes, other parts of a sentence containing the construction may be affected:

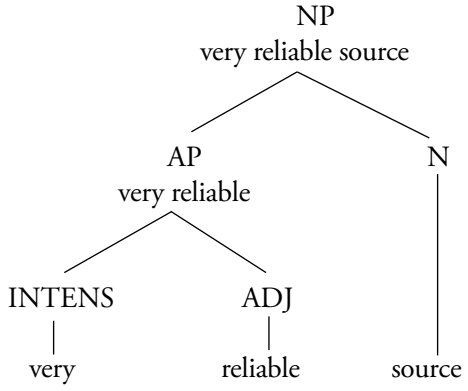
a. A reliable *source* **is** hard to find.
b. Reliable *sources* **are** hard to find.

The use of the singular *source* calls for an article (*a* or *the*) and a singular verb, *is*; the plural *sources* is incompatible with *a* and requires a plural verb, *are*. *Reliable* has no effect on these changes. In some cases, e.g., (c,d) above, modifiers can appear either before or after the head. Finally, some words (such as *very* and *quite*) nearly always function as modifiers. As in much grammatical analysis, there is no single formal characteristic for a modifier-head relation. Each instance calls for the use of different principles.

Functions can also occur within functions, as in, [[very reliable] source]. In this case, we have two headwords, *reliable* and *source*. *Reliable* serves as the headword of the construction *very reliable* and *source* serves as the headword of *very reliable source*, in which *very reliable* is analyzed as a unified modifier. Our analysis can be represented clearly in a tree diagram:



As we will observe later, tree diagrams are used also to represent layers of grammatical structure based on *formal* grounds. This mode of representation is more common in modern linguistics than the Reed-Kellogg (functional) diagrams you may be familiar with from school grammar lessons. Thus the phrase above might be formally labeled as in:



(NP = noun phrase; AP = adjective phrase; N = noun; ADJ = adjective; INTENS = intensifier)

The headword will typically determine the grammatical category of the phrase that it heads. Thus a phrase with a noun head will be a noun phrase; one with a verb head will be a verb phrase; and so on.

Meaning

The third perspective on grammar is that of **meaning**, i.e., the definition of an expression or the information potentially communicated by it. In this topic, we include the meaning of words, phrases, and whole sentences. A simple example of lexical (word) meaning used in grammatical analysis is the familiar definition of a verb as a word that denotes "action or state of being." Another familiar example is the traditional definition of the subject of a clause as the "doer of an action." Several chapters in this book will say more about such constructional meanings in regard to phrases, clauses, and entire sentences.

Our position in this book is that the study of grammar can take place most successfully when built on a solid base of formal analysis. Thus our chapters on parts of speech identify parts of speech primarily by analyzing their forms. Our emphasis on form does not at all imply that function or meaning is unimportant to language. Exactly the opposite is true, and we do include functional and semantic commentary on parts of speech and other grammatical forms. However, we will not rely solely or even primarily on function or meaning as criteria for identification. As we proceed to phrases and clauses, we will be able to make a more extensive use of the functional and meaningful properties of grammar, precisely because of our strong formal foundation. Our goal is to help you make appropriate use of all these facets in your thinking and teaching about language.

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GLOSSARY

CLAUSE: grammatical unit composed of two phrases—subject and predicate.

DIRECT OBJECT: the phrase traditionally viewed as representing the "recipient" of the action denoted by the main verb, or as representing the entity/ies directly affected by the event denoted by the main verb. Typically occurs after the main verb.

DISCOURSE: coherent, cohesive, contextualized, and purposeful communicative activity.

FORM: an expression's observable characteristics, including actual and potential inflections, actual derivational endings, stress, potential position in grammatical structures, and potential for grammatical operations.

FUNCTION: the roles an expression plays in a sentence. Functions include Subject, Predicate, Direct Object, Indirect Object, Object of a Preposition, Complement, Adjunct, Modifier, Head.

HEAD: main element in a grammatical construction.

LETTER: graphic unit, which in an alphabet, approximately represents a phoneme.

LEXEME: the basic form of a word; the form that you would look up in a dictionary (see **WORD FORM**).

MEANING: definition of an expression or the information potentially communicated by an expression, studied in semantics and pragmatics.

MODIFIER: an expression qualifying the head of a grammatical construction.

MORPHEME: the smallest linguistic unit that has a meaning or grammatical function; composed of one or more phonemes.

PHONEME: a contrastive sound unit, more or less adequately represented by one or more letters of the alphabet.

PHRASE: a grammatical unit composed of one or more words.

RELATIONSHIP: the role or function of a word or phrase in a sentence.

SENTENCE: the largest unit to which the grammatical rules of a language apply; may be composed of one or more clauses.

TEXT: language produced during discourse; can be produced as written documents or as recordings of spoken communication.

WORD: a grammatical unit composed of one or more morphemes.

WORD FORM: an inflected form of a word (see **LEXEME**).

4 Phonetics and Phonology

KEY CONCEPTS
Articulatory phonetics, phonetic symbols
Consonants, approximants, vowels
Syllables, feet
Phonology, phonemes, allophones, phonological rules

INTRODUCTION

In this chapter we sketch the pronunciation system of English. We begin with **phonetics**, a system for describing and recording the sounds of language objectively. Phonetics provides a valuable way of opening our ears to facets of language that we tend to understand by reference to their written rather than their actual spoken forms. **Phonology** concerns itself with the ways in which languages make use of sounds to distinguish words from each other.

Teachers should be knowledgeable about the phonetics and phonology of English because (1) the sound system is primary and the basis for the spelling system; (2) they may have to teach English pronunciation to students who are not native speakers of English; (3) they may have to teach poetry, which requires that they teach about rhyme, alliteration, assonance, and other poetic devices that manipulate sound; (4) it is important to understand accents and language variation and to react appropriately to them and to teach appropriate language attitudes about them to students (see our chapters on Language and Society and Usage in Book II); (5) we are so literate that we tend to "hear" the sounds of our language through its spelling system, and phonetics/phonology provides a corrective to that; and (6) phonetics and phonology provide systematic and well-founded understandings of the sound patterns of English.

ARTICULATORY PHONETICS

We have three goals in this section. First, we introduce you to the ways in which the sounds of English are produced. Second, we develop a system for classifying speech sounds on the basis of how they are produced. Simultaneously we introduce an alphabet approximating that developed by the International Phonetics Association (IPA), which will allow us to refer to sounds quite precisely. When we want to indicate that letters are to be interpreted as phonetic symbols, we enclose them in square brackets, [ ], and when we want to indicate that letters are to be interpreted as letters from an ordinary spelling system, we enclose them in angled brackets, < >.

The phonetic alphabet uses many of the letters of the English alphabet, but their pronunciations are very restricted and are not always the ones you might expect. In this system, there are no "silent" letters—every phonetic symbol represents an actual sound. Every letter always has the same pronunciation regardless of its context, no letter has more than one pronunciation, and no sounds are represented by more than one letter. To make fine distinctions, phoneticians add special symbols, called **diacritics**, to the basic letters. For some English sounds and for languages other than English, symbols not from the English alphabet have been devised. (You might visit the IPA web site for a full listing of the symbols.)

In the sections to follow, we describe the sounds represented by these symbols and how these sounds are made. As we go through these sections, pay attention to the ways in which individual sounds are ordinarily spelled in English, as well as to the phonetic spellings.

To produce speech, air must flow from the **lungs** through the **vocal tract**, which includes the **vocal folds** (popularly called the vocal cords, though they are more like thick elastic bands than strings), the nose or **nasal cavity**, and the mouth or **oral cavity** (See Figure 1). The vocal folds vibrate for some sounds but not for others. Air flows through the nose for certain sounds but not others. But the main creator of speech sounds is the mouth. We will describe the roles that each of these elements plays in the following paragraphs.

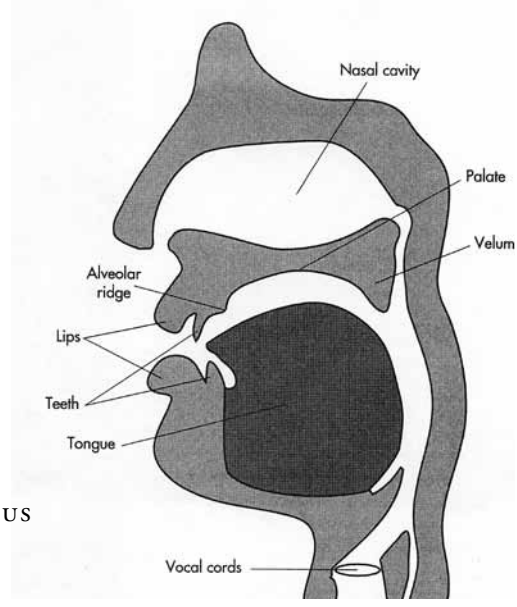


FIGURE 1: VOCAL APPARATUS

CONSONANTS

Consonants include the sounds we represent as <p, b, t, d, m, n, f, v, s, z, l, r, h> in the ordinary alphabet. All **consonants** are produced by entirely or almost entirely stopping the airstream coming from the lungs. When we almost entirely stop the airstream we force it through such a narrow opening that the airflow at that point is turbulent and noisy.

We classify consonants according to the following characteristics: (a) whether or not the vocal folds are vibrating (**voicing**); (b) whether the sound is made with a fully stopped or merely constricted airstream (its **manner of articulation**); (c) where in the mouth the stoppage or constriction is made (its **place of articulation**); (d) whether or not air is flowing through the nasal cavity (**nasality**); and (e) whether or not the lips are pursed (**lip-rounding**).

Voicing

As a warm-up exercise, make the sound fffff, and keep it going for a count of five. Now make the sound vvvvv, and keep it going for a count of five. Now alternate these two: fffffvvvvvfffffvvvvv. You probably noticed that vvvvv had a "buzz" that fffff did not have. That "buzz" is caused by the vibrating of your vocal folds—which you can check by putting your fingers on your throat or by covering your ears as you alternate fffff and vvvvv. Now try the same exercises with the first sounds of the following words: *thigh*, *thy*; *sip*, *zip*. You should be able to feel the vocal folds vibrate as you make the second sound of each pair.

Sounds produced with vibrating vocal folds (see Figure 1) are said to be **voiced**; those produced without vocal cord vibration are **voiceless**. Table 1 lists the voiced and voiceless consonants of English. The letters in [ ] are the phonetic symbols for the sounds.

VOICED	VOICELESS
by [b]	**p**ie [p]
my [m]	
wet [w]	
vie [v]	**f**ie [f]
thy [ð]	**th**igh [θ]
die [d]	**t**ie [t]
nigh [n]	
zip [z]	**s**ip [s]
lie [l]	
rye [r]	

bei**ge** [ʒ]	ba**sh** [ʃ]
jive [dʒ]	**ch**ive [tʃ]
yet [j]	
guide [g]	**k**ite [k]
go**ng** [ŋ]	
	hive [h]

TABLE 1: VOICED AND VOICELESS CONSONANTS

Exercise

1. Collect a set of words in which each of the voiced and voiceless sounds listed in the two columns above occurs as the first sound of a word, in the middle of a word (specifically between two vowels), and at the end of a word, as in: [b] ***b**ird, rub**b**ing, rub;* [p] ***p**an, tap**p**ing, tap**p**.* How are each of these sounds ordinarily spelled? (Note: English single and double consonants, as in *rub* and *rubbing*, *tap* and *tapping*, represent the same sound. The doubled consonants tell us how the vowel before them is to be pronounced; cf. *tapping, taping*.)

2. Identify the sound represented by each of the following phonetic symbols and for each sound collect five words in which it occurs: [p, b, f, v, θ, ð, ʃ, ʒ, tʃ, dʒ, s, z]. How is each of these sounds ordinarily spelled?

Nasality

Make the sound represented by <m> in the word *Pam* and continue it for some seconds. As you continue it, pinch your nose and observe what happens to the sound. It should stop immediately. This shows that air was flowing through your nose as you produced this sound. Now try the same little experiment with the <n> of *pan* and the <ng> of *pang*. You should find that the air flows through the nose in these two cases also. Sounds in which air flows through the nose are called **nasal** sounds. The air is allowed into the nose by lowering the **velum**, the soft palate at the back of the mouth (see Figure 1). English has three main nasal sounds:

[m]	Pa**m**	cla**mm**y	**m**at
[n]	pa**n**	cla**nn**ish	**N**at
[ŋ]	pa**ng**	cli**ng**y	----

Exercise

Using the data just above, say where [ŋ] **cannot** occur in a word. How are each of these nasal sounds ordinarily spelled?

Manner of articulation

By **manner of articulation** we mean the kind of closure or constriction used in making the sound. We classify English consonants according to three manners of articulation: **stops** (full stoppage of the airstream somewhere in the *oral* cavity between the vocal folds and the lips, as in [p], [b], [m]); **fricatives** (constriction of the airstream in the oral cavity producing turbulence and noise, as in [f], [v]); **affricates** (full stoppage of the airstream followed immediately by constriction, as in [tʃ], [dʒ]). Table 2 summarizes the different manners of articulation.

Stops

[p]	**p**ad	[b]	**b**ad	[m]	**m**at
[t]	**t**ad	[d]	**d**a**d**	[n]	**N**at
[k]	**c**ad	[g]	**g**ad	[ŋ]	ta**ng**

Fricatives

[f]	**f**ie	[v]	**v**ie
[θ]	**th**igh	[ð]	**th**y
[s]	**S**ue	[z]	**z**oo
[ʃ]	**sh**oe	[ʒ]	**j**us (au jus)
[h]	**h**ow		

Affricates

[tʃ]	**ch**in
[dʒ]	**g**in

TABLE 2: MANNERS OF ARTICULATION

Exercise

For each of the sounds listed in Table 2, collect five words in which the sound occurs as the last sound of the word and another five in which the sound occurs in the middle of the word (specifically, between two

vowels), as [ŋ] is in *ring, ringing*. How is each sound ordinarily spelled?

Place of articulation

By **place of articulation** we mean the area in the mouth at which the consonantal closure or constriction occurs. English uses only seven places of articulation (see Figure 1) which we describe and illustrate below.

Bilabial sounds are made by bringing both lips together to stop the airstream:

[p]	**p**ie	cu**pp**ing	cu**p**
[b]	**b**y	clu**bb**ing	cu**b**
[m]	**m**y	co**m**ing	co**m**e

Labiodental sounds are made by bringing the top teeth into contact with the bottom lip and forcing air between the two to create the fricatives:

[f]	**f**eel	ra**ff**le	tou**gh**
[v]	**v**eal	ra**v**el	do**v**e

Interdental sounds are made by placing the tip of the tongue between the top and bottom teeth and forcing air through. Again, these are both fricatives:

[θ]	**th**igh	e**th**er	mou**th**	ba**th** (noun)
[ð]	**th**y	ei**th**er	mou**th**	ba**the** (verb)

Alveolar sounds are made by bringing the tongue and the alveolar ridge (the bony ridge just behind the top teeth) together to create either a stop or fricative:

[t]	**t**ub	boa**t**ing	boa**t**	[s]	**s**ip	fu**ss**y	gra**ce**
[d]	**d**ub	bo**d**ing	bo**d**e	[z]	**z**ip	fu**zz**y	gra**z**e
[n]	**kn**it	bo**n**ing	bo**n**e	[r]	**r**ip	te**rr**or	tea**r**

(Alveo-)palatal sounds are made by bringing the blade of the tongue to, or close to, the alveo-palatal area of the roof of the mouth to create fricatives and affricates:

[ʃ]	**s**ure	vi**ci**ous	ru**sh**
[ʒ]	**g**enre	vi**si**on	rou**ge**
[tʃ]	**ch**in	ca**tch**er	e**tch**
[dʒ]	**g**in	e**dge**r	e**dge**

Velar sounds are created by stopping the airstream by bringing the back of the tongue into contact with the velum:

[k]	**c**ould	ba**ck**er	tu**ck**
[g]	**g**ood	ba**gg**er	tu**g**
[ŋ]	------	ba**ng**er	to**ng**ue

Glottal sounds are created by either narrowing the vocal folds sufficiently to create a fricative or closing them to create a stop:

[h] **h**at ca**h**oots [ʔ] bu**tt**er (some varieties of English)

Exercise

For each of the sounds listed under Place of Articulation, find five words in which the sound occurs. How are each of these sounds ordinarily spelled?

Approximants

Approximants are sounds made by narrowing the oral cavity but not enough to cause turbulence in the airstream; the airstream is said to be smooth. The beginning sounds of *lye* and *rye* are approximants. The narrowest point in the airstream is wider in approximants than in fricatives, but is not as wide as it is in vowels. Approximants are more **sonorant** (**resonant**, i.e., naturally loud) than consonants, but less so than vowels. They are like consonants in that they typically occur before or after the vowels of syllables (see below). English has three kinds of approximants.

Lateral approximants are made by touching the tongue to the alveolar ridge while allowing the air to pass along one or both sides, as in [l]—in *lack*, *call*, and *callow*.

Central approximants are made by raising the sides of the tongue so that the air flows along the center of the tongue, as in [r]—in *rock*, *roll*, and *Rory*. [r] is regarded as an alveolar sound.

Glides (**semivowels**) come in two kinds: palatal and labio-velar. **Palatal**

glides are made by raising the tongue toward the hard palate, close to where the vowel in *eat* is made. The first sound of *yet*, *yolk*, and *y'all* is a palatal glide, represented phonetically as [j]. **Labio-velar** glides are made by rounding the lips and simultaneously raising the back of the tongue toward the velum, close to where the vowel sound of *ooze* is made. Labio-velar glides thus have two places of articulation—they are both labial and velar. The first sound of *wet*, *wall*, and *wink* is a labio-velar glide, represented phonetically as [w].

Lateral	[l]	**l**et	
Central	[r]	**Rh**ett	
Glides	Labio-velar	[w]	**w**et
	Palatal	[j]	**y**et

Articulatory descriptions

An **articulatory description** of any consonant or approximant must specify (at least) its place and manner of articulation, whether it is voiced or voiceless, and whether it is nasal or oral. For example, [m] is made at the lips by stopping the airstream, is voiced, and is nasal. These features are represented as:

	[m]	[w]	[l]
Voicing	voiced	voiced	voiced
Place	bilabial	labio-velar	alveolar
Manner	stop	glide	lateral approximant
Nasality	nasal	oral	oral
Example word	**mime**	**wow**	**low**

We can gather all of the consonants that we have described into a single chart:

	bilabial	labio-dental	inter-dental	alveolar	(alveo-)palatal	velar	glottal
stop	p b			t d		k g	(ʔ)
nasal stop	m			n		ŋ	
fricative		f v	θ ð	s z	ʃ ʒ		h
affricate					tʃ dʒ		
approximants							
glides	(w)				j	(w)	
lateral				l			
central				r			

TABLE 3: ENGLISH CONSONANTS AND APPROXIMANTS

Exercise

You should now be able to provide an articulator description for each of the following sounds. Consult Tables 1-3.

	[t]	[k]	[b]	[d]	[g]
Voicing					
Place					
Manner					
Nasality					
Example word					

	[n]	[ŋ]	[f]	[v]	[θ]
Voicing					
Place					
Manner					
Nasality					
Example word					

	[ð]	[s]	[z]	[ʃ]	[ʒ]
Voicing					
Place					
Manner					
Nasality					
Example word					

	[tʃ]	[dʒ]	[l]	[r]	[h]
Voicing					
Place					
Manner					
Nasality					
Example word					

	[w]	[j]
Voicing		
Place		
Manner		
Nasality		
Example word		

VOWELS

Vowels include the sounds we ordinarily represent as the letters <a, e, i, o, u>, as well as a number of other sounds for which the ordinary alphabet has no unique symbols.

Vowels are distinguished from consonants in several ways. As we have seen, consonants are produced by constricting the airstream to various degrees as it flows through the oral tract. **Vowels** are produced with a smooth, unobstructed airflow through the oral tract.

Differences in vowel quality are produced by different shapes of the oral cavity. Characteristic vowel qualities are determined by (a) the height of the tongue in the mouth; (b) the part of the tongue raised (front, middle, or back); (c) the configuration of the lips; and (d) the tension of the muscles of the oral tract. An articulatory description of a vowel must include all of these features.

Tongue height

Pronounce the words *eat* and *at*. Now pronounce just the vowels of these two words. Notice that as you go from the vowel of *eat* to the vowel of *at*, your mouth opens. If this is not obvious to you just by playing with these two vowels, look in a mirror as you produce them. Alternate the words, and then just the two vowels.

Once you've become accustomed to the different degrees of openness of these two vowels, pronounce *ate* between *eat* and *at*. The degree of openness of its vowel falls between those of *eat* and *at*, so there is a continuous increase in mouth openness as you go from one vowel to another. These degrees distinguish **high**, **mid**, and **low** vowels. We will use the following symbols for this sequence of vowels:

(1)	**ea**t	[i]	High
	at**e**	[e]	Mid
	at	[æ]	Low

Exercise

For each of the three vowels above, find five words in which the vowel occurs. Be clear about which symbol most accurately applies to each vowel. How is each of these vowels ordinarily spelled?

Front and back vowels

Now compare the vowel of *beat* with that of *boot*. Alternate the words, and then just the vowels. It will be more difficult this time to monitor the activities of your tongue as you shift from one of these to the other, but try anyway.

You produce the [i] of *beat* with the front (blade) of your tongue raised toward your palate. If you draw in your breath as you make this vowel, you will feel the cold air against your palate. As you shift from [i] to [u], the vowel of *boot*, you will find yourself raising the back of your tongue. (You will also find yourself pursing (**rounding**) your lips, but disregard this for the moment.) Because of the relative positions at which these vowels are made in the mouth, phoneticians call [i] and the other vowels in (1) **front vowels**, and [u] a **back vowel**.

The back vowels, like the front ones, descend from high, through mid, to low, in a continuous sequence. You can observe this by pronouncing the words *coot*, *coat*, and *cot*, and then just their vowels. As you produce this series of vowels you'll find your mouth opening (monitor your lower jaw) as you go from *coot* to *coat* to *cot*. We use the following symbols for these back vowels:

(2)	c**oo**t	[u]	High
	c**oa**t	[o]	Mid
	c**o**t	[ɑ]	Low

Exercise

For each of the three vowels just above, find five words in which the vowel occurs. Be clear about which symbol most accurately applies to each vowel. How is each of these vowels ordinarily spelled?

We combine these two series of vowels in Table 4:

	FRONT		BACK
HIGH	i		u
MID	e		o
LOW		æ	ɑ

TABLE 4: FRONT AND BACK VOWELS

Exercise

For each of the vowels in Table 4, find five more words in which the vowel occurs. Be clear about which symbol most accurately applies to each vowel. How is each of these vowels ordinarily spelled?

Lip rounding

As you compared [i] and [u] you probably noticed that your lips changed shape as you shifted from the front vowel to the back one. Your lips were **rounded** as you produced [u]. They were **unrounded** (**spread** or **neutral**) as you produced [i]. As you moved through the series of back vowels you may also have noticed that lip rounding decreased as you moved from high to low. In fact the lips are unrounded during the pronunciation of [ɑ]. In English, the only rounded vowels are back, though many languages, such as French and German, have rounded front vowels.

Exercise

Find five pairs of words to illustrate lip rounding. The first member of each pair of words must include a rounded vowel; the second member should be as similar as possible to the first, but must include a corresponding vowel that is not rounded. Assign a phonetic symbol to each vowel, e.g., *heat* [i], *hoot* [u]. As always, note how each vowel is ordinarily spelled.

Intermediate vowels

First, pronounce the words *meat*, *mitt*, *mate*, *met*, and *mat*. Then pronounce just their vowels:

m**ea**t	m**e**	[i]
m**i**tt		[ɪ]
m**a**t**e**	m**ay**	[e]
m**e**t		[ɛ]
m**a**t		[æ]

The vowels we've just added, [ɪ] and [ɛ], are intermediate in height between [i] and [e], and [e] and [æ], respectively.

Exercise

For each of the vowels we've just discussed, find 5 more words in which they occur. Note how they are ordinarily spelled.

Now pronounce the series of words *suit*, *soot*, *sowed*, *sought*, *sot*. Then pronounce just their vowels:

s**ui**t	c**ooe**d	fl**ew**	[u]
s**oo**t	c**oul**d		[ʊ]
s**owe**d	c**o**d**e**	fl**ow**	[o]
s**ough**t	fr**augh**t	c**aw**	[ɔ]
s**o**t	c**o**t	sp**a**	[ɑ]

We've added two more intermediate vowels to the back series, [ʊ] and [ɔ].

Exercise

For each of the vowels we've just discussed, find 5 more words in which they occur. Note how they are ordinarily spelled.

Now say the following words, paying attention to their vowels, and especially to the movement of your tongue as you go from one vowel to the next: *ate*, *up*, *oat*. The vowel in *ate* is [e] and that in *oat* is [o]. The vowel in *up* is represented by [ʌ], called "wedge" or "caret."

We hope that you noticed your tongue pull back as you went from [e] to [ʌ], and back farther as you went from [ʌ] to [o]. [e] is a mid, front vowel, and [o] is a mid back vowel. As [ʌ] is between these two and at about the same height, it is a mid central vowel.

We've now added five intermediate vowels: [ɪ] as in *mitt*, *hid*, *rip*; [ɛ] as in *wept*, *bed*, *flex*; [ʊ] as in *hood*, *could*; [ɔ] as in *caw*; and [ʌ] as in *mutt*. Of these, [ɪ] and [ɛ] are front and unrounded, while [ʊ] and [ɔ] are back and rounded, and [ʌ] is central and unrounded. These new vowels differ from the ones we introduced earlier in several ways:

1. In length: [i], [e], [u], [o], [ɔ], and [ɑ] are longer than [ɪ], [ɛ], [æ], [ʊ], and [ʌ], when they occur in the same contexts.
2. In position in the mouth: [i] and [e] are higher and farther front than [ɪ] and [ɛ], respectively; [u] and [o] are higher and farther back than [ʊ] and [ɔ], respectively.

3. All vowels can occur in syllables (see below) that end in at least one consonant (**closed** syllables); [i], [e], [u], [o], [ɔ], and [ɑ] can occur as the final sound in a syllable (**open** syllables).
4. Muscle tension: [i], [e], [u], [o], [ɔ], and [ɑ] are produced with greater muscle tension in the articulators than [ɪ], [ɛ], [æ], [ʊ], and [ʌ] are. The former are **tense** vowels; the latter are **lax**. The greater tension in [i], [e], [u], [o], [ɔ], and [ɑ] may explain why they are longer and more peripheral, i.e., closer to the boundary of the mouth, than the other vowels.

Even though there are several differences separating these two sets of vowels, we will refer to them as **tense** and **lax** vowels. Table 5 lists all of them:

TENSE		LAX	
b**ea**t, b**ee**	[i]	h**i**t	[ɪ]
b**oo**t, b**oo**	[u]	h**oo**d	[ʊ]
b**ai**t, b**ay**	[e]	h**ea**d	[ɛ]
b**oa**t, b**eau**	[o]	h**a**t	[æ]
b**ough**t, p**aw**	[ɔ]	h**u**t	[ʌ]
p**o**t, sp**a**	[ɑ]		

TABLE 5: TENSE AND LAX VOWELS

You may have noticed that all of the example words we have used to exemplify the vowels we have distinguished consist of a single syllable. This is because vowels in multi-syllabic words can differ from those in monosyllables, and we wanted to compare vowels in similar contexts. We have now distinguished the following vowels:

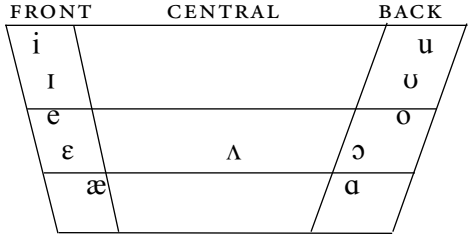


TABLE 6: ENGLISH VOWELS IN MONOSYLLABIC WORDS

Not all American English speakers distinguish [ɔ] and [ɑ] in all contexts.

In some dialects of American English (California, Midwest), the vowels [ɔ] and [ɑ] in pairs of words such as *sought* and *sot*, *caught* and *cot*, and *wrought* and *rot* are pronounced identically, though the vowel used is neither [ɔ] nor [ɑ], but one intermediate between them.

Vowels in multi-syllabic words

Pronounce the words ***a**bove*, *soda*, *sofa*, *comma*, *arena*, *patina*, *photograph*, paying particular attention to the vowel represented by the bold letters. Then pronounce this vowel in isolation. This vowel is called **schwa** and written [ə]. Schwa is made at approximately the same place as [ʌ], that is, farther forward than the back vowels and farther back than the front ones. Hence, it is central. In addition, [ə] is mid, lax, and unrounded. It is heard primarily in unstressed syllables, as in the words above. It is the vowel we produce if we vocalize as we prepare to speak—*uh*. The tongue is said to be in its neutral position as we pronounce this vowel.

Exercise

Find five words to illustrate the vowel [ə]. Can you estimate how common this vowel is in English? What letters of the alphabet ordinarily indicate this sound?

We can present the vowels as we presented the consonants, on a chart indicating their articulatory properties.

	FRONT	CENTRAL	BACK	
	Unrounded			Rounded
Upper high	i			u
Lower high	ɪ			ʊ
Upper mid	e	ə		o
Lower mid	ɛ	ʌ		ɔ
Low	æ		ɑ	

TABLE 7: ENGLISH VOWELS

Exercise

1. Find five words to illustrate each of the vowels we distinguish in Table 7. Be clear about which symbol most accurately applies to each vowel.

2. Provide an articulatory description for each of the following vowels; that is, indicate its height, position (front or back), tension, and lip configuration.

	[ɪ]	[e]	[u]	[ʊ]	[ɛ]	[ʌ]
Height						
Position						
Tension						
Rounding						
Example word						
	[ɑ]	[æ]	[o]	[i]	[ə]	[ɔ]
Height						
Position						
Tension						
Rounding						
Example word						

Diphthongs

We have approached vowels as if they were articulated by a specific configuration of the tongue, lips, and oral cavity, which is held constant throughout their pronunciation. Vowels made like this are called **monophthongs**; others, called **diphthongs**, involve a change in the configuration of the mouth.

The vowel sounds in the words *boy*, *by*, and *how* involve a change in the shape of the mouth as the vowel is being produced. The vowel of *boy* begins with approximately the mid back vowel [ɔ] and finishes with approximately the high front lax vowel [ɪ] (or the palatal glide [j]). The vowel of *by* begins with approximately the low back vowel [a] (a low back vowel slightly more forward than [ɑ], but not as forward as [æ]) and also finishes with approximately [ɪ] (or [j]). The vowel of *how* begins with approximately [a] and finishes with approximately the high lax rounded vowel [ʊ] (or the labio-velar glide [w]). We represent these diphthongs as [ɔɪ], [aɪ], and [aʊ], respectively (though many linguists use [ɔj], [aj], and [aw]).

Exercise

1. For each of the three diphthongs symbolized below provide four more example words. In two of these words the diphthong should appear in a closed syllable (i.e., before a consonant, e.g., *Boyd*) and in the other two words it should appear in an open syllable (i.e., not followed by a consonant, e.g., *boy*).

[ɔɪ]	_____	_____	_____	_____
[aɪ]	_____	_____	_____	_____
[aʊ]	_____	_____	_____	_____

2. Are the English diphthongs tense or lax? (Hint: they can occur in open syllables.)

A second set of English diphthongs is not as clearly distinguished as the first, primarily because we tend to perceive them as simple vowels. However, in a precise (**narrow**) phonetic transcription they must be represented as diphthongs. The tense front vowel [e] is diphthongized. If you listen carefully you will notice that the vowel of *bate* is actually pronounced [eɪ]. The tense back vowel [o] is also diphthongized: if you listen carefully you will notice that the vowel of *boat* is actually pronounced [oʊ]. So, the front tense vowel is diphthongized by the addition of a front vowel and the back tense vowel is diphthongized by the addition of a back vowel. We can express this pattern as a rule: *Mid and high tense vowels are diphthongized by the addition of a high lax vowel that matches the original vowel in frontness or backness.*

Diphthongization of these vowels is a feature of English rather than a universal feature of natural language. Other languages, notably Spanish and German, do not diphthongize their corresponding vowels. The tendency to diphthongize these vowels is one characteristic of the "foreign accent" that betrays English speakers when they begin to learn these languages.

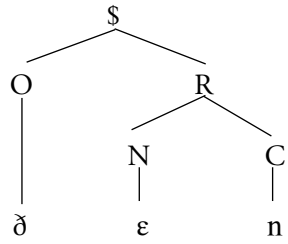
SYLLABLES AND FEET

It's a lot easier to count syllables than to give them a satisfactory definition. If the entire class were to count the syllables in this paragraph, there would be considerable agreement about the number, but probably not about where each syllable begins and ends. The fact that syllabic writing systems developed before alphabetic systems (see our Spelling chapter in Book II) suggests that syllables are very salient linguistic units. That children seem to be able to associate symbols with syllables before they can associate symbols

with phonetic segments also points to the importance of the syllable.

Every **syllable** (symbolized as $) consists of at least a **nucleus** (symbolized as N), which is typically a vowel. The nucleus may be preceded by an **onset** (symbolized as O), consisting of one or more consonants, and followed by a **coda** (symbolized as C), again consisting of one or more consonants. The nucleus and the coda together make up a unit called the **rhyme** (R). The diagram (3) illustrates the constituent of the single-syllable word *then*.

(3)



Because vowels are high in sonority, a syllable nucleus is usually a vowel. However, a consonant with high sonority, such as [l,r,m,n,ŋ] may also be a nucleus. The sonority level of a syllable thus rises from the onset (if there is one) up to a peak in the nucleus and falls off again in the coda. In this respect, the onset and coda are (almost) mirror images of each other.

Parts of syllables may be repeated for poetic effects. Of these repetitions, rhyme is the most important: it involves repeating the rhyme of syllables, usually at the ends of lines, as the rhyming words in the following stanza show:

(4) Piping down the valleys wild,
Piping songs of pleasant glee,
On a cloud I saw a child,
And he laughing said to me:
(William Blake, Introduction to *Songs of Innocence*)

The syllable onsets, [w] of *wild*, [tʃ] of *child*, [gl] of *glee*, and [m] of *me* are not part of Blake's rhymes.

Repeating onsets, or first sounds in onsets, as in ***th**en and **th**ere*, creates **alliteration**. Repeating nuclei, as in *M**i**key l**i**kes it*, or *the incr**e**dible **e**dible **e**gg* creates **assonance**.

In speech, syllables are combined into rhythmic units called feet, which are also of considerable importance in scanning lines of poetry. Each **foot** consists of at least one stressed syllable (its energy peak) and one or two

unstressed syllables. Feet are differentiated from each other by the number of stressed syllables they contain and by the position of the stressed (S) syllable(s) relative to other syllables in the foot. In (5), S represents a stressed syllable and U an unstressed one; the stressed syllable of each example word is bolded.

(5)	Iambic:	[U S]	to**day**
	Trochaic:	[S U]	**tro**chee
	Anapestic:	[U U S]	inter**vene**
	Dactylic:	[S U U]	**per**sonal
	Spondaic:	[S S]	**good news**

In English, stressed syllables tend to be approximately equally far apart in time; as a result unstressed syllables may be articulated slower or faster, depending on the type of foot. (See Beers (2003: 339) Appendix I: the 175 most common syllables (as ordinarily spelled) in the 5,000 most frequently occurring English words.)

Exercise

1. In the stanza given in (4) above, identify each stressed syllable, determine the feet, and identify the kind of meter (iambic, trochaic, etc.) used.

2. How does your dictionary identify syllables and the stressed syllable(s) in words? Why does your dictionary indicate syllabication of words? (You'll probably have to read the relevant section of your dictionary's front matter for this.) Would your dictionary and our system always give the same syllabic analysis of words?

3. Compare the phonetic alphabet we introduced here with the system used in your dictionary to indicate pronunciation. Which is simpler to learn? Which is simpler to use? For whom? What other pros and cons can you think of for each?

PHONOLOGY

While phonetics is the study of the ways in which speech sounds are produced, **phonology** is the study of (1) how the speech sounds of a language are used in that language to distinguish meaningful units (such as words)

from each other, and (2) how sounds are patterned in a language. Consequently, the study of phonology requires us to take meaning into consideration, while phonetics does not. In this section we explore phonology and the basic unit of phonological analysis, the **phoneme**.

PHONEMES

You might reasonably have assumed that whenever speakers distinguish between a pair of sounds, they will use that difference to distinguish between words. For example, we know that English speakers distinguish between [s] and [z], and we use this difference to signal the difference between the words *sip* and *zip*. We will say that [s] and [z] **contrast** with each other in English. In fact, all of the sounds we have described so far contrast with each other in English and so are used by English speakers to distinguish words from each other. You can test this out by taking any pair of sounds (as we took [s] and [z]) and creating a pair of words (like *sip* and *zip*) which are identical, except that where one has one sound, the other has the other sound, just as where *sip* has [s], *zip* has [z]. Pairs of words like this are called **minimal pairs**, and are used to demonstrate that pairs of sounds are used in a language to distinguish words from each other. Sound units that distinguish words from each other are called **phonemes**. We enclose phonemes in / / (e.g., /s/, /z/) to distinguish them from sounds ([s], [z]) and ordinary letters (<s>, <z>).

Exercise

Phonemes are most easily identified through minimal pairs. Thus *Pete* [pit] and *beat* [bit] differ only in that where [pit] has [p], [bit] has [b]. These two words make a minimal pair that shows that [p] and [b] represent separate phonemes in English, which we symbolize as /p/, /b/. For each pair of sounds below, identify a minimal pair that shows that they represent different phonemes.

[k]–[g]	[θ]–[ð]	[ɑ]–[æ]	[l]–[r]
[n]–[ŋ]	[w]–[j]	[aɪ]–[aʊ]	[f]–[dʒ]
[f]–[s]	[i]–[ɪ]	[aɪ]–[oɪ]	[tʃ]–[dʒ]
[s]–[ʃ]	[ɛ]–[æ]	[tʃ]–[s]	[k]–[ŋ]

ALLOPHONES

Now listen to the vowels in the words *cat* and *cad*. Are they identical or different? We hope you said "different." Can you now say how they differ? We

hope you said that one was longer than the other. Now listen to the consonants after the vowels. Are these the same or different? Again, we hope you said different, and that you know that [t] is voiceless and [d] is voiced. Now, which vowel, the longer or the shorter, precedes [d] and which precedes [t]? We hope you said that the longer vowel precedes the voiced consonant.

Are the two vowels similar in any way? Again, we hope you said that they seem to be longer and shorter versions of the same vowel, [æ]. Let's use [ː] to indicate extra length. So, the vowel before voiceless [t] is just [æ], but the one before voiced [d] is [æː].

Now let's listen to some more word pairs like *cat* and *cad*:

root	rood
moat	mode
leaf	leave
gape	Gabe

Listen to the vowels in each pair. You should hear that the vowel in the second word in each pair is a little longer than the vowel in the first.

Now determine the similarities and differences between the consonants after the vowels in each word pair. You should find that the consonant in the first word is the voiceless version of the consonant in the second word.

Turning our attention again to the vowels in each word pair: how are they related? We hope you said that they were very similar vowels, specifically, short and long versions of the same vowel.

You should now be able to determine a very general rule of English. When are vowels lengthened and when are they not lengthened?

Your answer should be something along the lines of: *English vowels are lengthened when they occur before a voiced consonant; otherwise they are not lengthened*.

So far we've seen [æ] and [æː], [u] and [uː], [o] and [oː], [i] and [iː], and [e] and [eː]; in each case the longer vowel occurs before a voiced consonant. We've also noted that the vowels are otherwise virtually identical—they differ only in length. So it makes good sense to regard these pairs of vowel sounds as slightly different pronunciations of the same vowel, and that whether the vowel is lengthened or not depends on whether the consonant that follows it is voiced or not.

Importantly, the long and short pairs of vowels do not contrast with each other: English contains no pairs of words that are identical except that where one contains a short version of a vowel, the other contains the longer version of the same vowel. Consequently, the long and short versions of

vowels do not represent separate phonemes.

Let's now turn our attention to some consonants. For example, English speakers pronounce the [t] in *toll* differently from that in *stole*. The [t] of *toll* is breathier than the [t] of *stole*. The former is said to be **aspirated**, and the latter **unaspirated**. We represent the aspirated [t] as [tʰ], with the **diacritic** [ʰ] indicating aspiration. We represent the unaspirated [t] as [t] with no diacritic. The important point here is that English speakers do not signal any difference in meaning with the difference between [tʰ] and [t]. They treat the two sounds as variant ways of pronouncing the "the same sound." Substituting one of these sounds for the other would not affect the meaning of a word, but it would create an odd and perhaps non-native pronunciation of the word. No pair of English words is distinguished solely by the difference between [t] and [tʰ]. You can satisfy yourself that this is so by trying to find a minimal pair of English words differentiated solely by the fact that where one has an aspirated consonant the other has an unaspirated version of that same consonant. (Don't spend too long trying!)

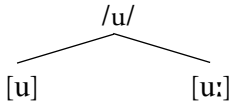
Let's now look at a different pair of English sounds. If we replace the [t] in [rɑt] (*rot*) with [d], then we get the sequence of sounds [rɑd] (*rod*), which, of course, is quite distinct in meaning from *rot*. Clearly, English speakers treat the difference between [d] and [t] differently from the way they treat the difference between [tʰ] and [t] and between longer and shorter versions of vowels. In the case of [t] and [d], the difference can signal a difference in meaning; in the other cases it cannot. Differences in sound that signal differences in meaning are said to be **phonemic**, **distinctive**, or **contrastive**. Differences in sound that do not signal meaning differences are **non-distinctive** or **non-contrastive**. One objective of phonology is to identify which sound differences are contrastive and which are not. As we have seen, the contrastive sound units are called phonemes.

Phonemes and allophones

A good way to think about a phoneme is as a group of phonetically similar sounds that are treated as members of the same sound category. Because the members of a sound category are treated as "the same sound" in a language, they cannot be used for communicating differences in meaning. English speakers treat [tʰ] and [t] as belonging to the same sound category, so they cannot be used to distinguish one word from another. Different phonemes are different categories of sounds and the differences among these categories can signal differences in meaning. English speakers treat [t] and [d] as belonging to different sound categories—/t/ and /d/, respectively—and so

these can be used to differentiate one word from another.

Sound categories are abstractions. We can only perceive them when one of their members is pronounced. The sounds that make up the category are called the **allophones** of that phoneme. Thus [t] and [tʰ] are allophones of the English phoneme /t/. Notice that the individual sound symbols are the same as those we used for phonetics, but to distinguish phonology from phonetics, we enclose phonemes in **slanted brackets** / / and use square brackets [ ] for phonetic notation. Perhaps the following diagram will help. It represents the phoneme /u/ and two of its allophones:



That is, the phoneme /u/ is pronounced in (at least) two ways, [u] and [uː], depending upon its context. Table 8 lists the phonemes of English.

Consonants:	/p, t, k, b, d, g, m, n, ŋ/
	/f, θ, s, ʃ, h, v, ð, z, ʒ/
	/tʃ, dʒ/
	/r, l, w, j/
Vowels:	/i, ɪ, e, ɛ, æ, ɑ, ɔ, o, ʊ, u, (ə)/
Diphthongs:	/ɔɪ, aʊ, aɪ/

TABLE 8: ENGLISH PHONEMES

As you have no doubt noticed, there are nearly 40 phonemes of English (the number varies somewhat from dialect to dialect), while there are only 26 letters in the English alphabet. This is one of the reasons why the alphabet appears to fit the language so poorly. (For more on English spelling see our chapter on Spelling in Book II.)

Exercise

1. What phoneme is represented by the bolded letter(s) in the following words? Make sure to enclose the symbols you choose in the phoneme slashes //.

***t**on, **b**ump, **d**ip, **c**omb, **ch**in, **z**oom, **sh**ave, **m**ango, thi**ng**, **l**ame, **r**ead, sl**ee**p, **r**ed, **m**at, **g**ood, **c**au**gh**t, **k**ite, **b**id, **c**o**y**.*

2. Transcribe the following words in a phonemic (**broad**) transcription. That is, just represent the phonemes that each word is composed of and ignore the allophonic detail.

thin, then, cheese, rouge, June, shin, fling, heave, yak, cow.

Allophones and their contexts

We have already noted that if we substitute the aspirated allophone of /t/ for its unaspirated relative, then we create an odd pronunciation of a word. [tʰɪl] is the typical American English pronunciation of *till*, but [tɪl] is not. What, if any, patterns can we observe in where allophones of a phoneme can and cannot occur?

Some allophones of a phoneme are in **complementary distribution**, that is, they occupy different positions (**contexts** or **environments**) in words—where one can occur the other cannot. As we have seen, English has a very general pattern of lengthening vowels before voiced consonants. That is, the allophone of a vowel phoneme before a voiced consonant will be appreciably longer (up to three times longer) than the allophone of the same vowel phoneme before a voiceless consonant. For example, listen to the pronunciation of /ɛ/ in *bet* and *bed*. You should have little difficulty in hearing the difference in vowel length. We can represent the pattern of occurrence (**distribution**) of these two allophones of the phoneme /ɛ/ as the following **phonological rule**: *When the phoneme /ɛ/ occurs before a voiceless consonant it is pronounced as its allophone [ɛ]; when it occurs before a voiced consonant it is pronounced as its allophone [ɛː].* (Remember: [ː] is a diacritic indicating a lengthened sound.)

In fact, the rule is much more general than this. Because it applies to all vowels, we can write it as: *In English a vowel is longer before a voiced consonant than it is before a voiceless one.* One of our objectives in studying a language is to be able to describe these sound patterns, i.e., to be able to specify in the most general terms possible the phonetic environments in which each allophone occurs.

Let's look at another very systematic set of English vowel allophones. The vowels of *cap* and *can* differ phonetically: that of *cap* is a plain [æ]; that of *can* is **nasalized**, represented by [æ̃]. (If you have trouble hearing the difference, try starting to say each word normally and then omit the final consonant.) The phoneme /æ/ thus has the allophones, [æ] and [æ̃]. In fact, all English vowels have both nasalized and non-nasalized allophones. We can represent this as the rule: *Whenever an English vowel occurs before a nasal consonant, it becomes nasalized; otherwise it is non-nasalized.*

In fact, the situation is a bit more intricate that this. Because nasals are voiced, we should expect a vowel before them to be lengthened relative to the same vowel before a voiceless sound. And, indeed, this is what we find. Listen to the vowels in *cat*, *cad*, and *can*. You should notice that the first vowel is unlengthened, [æ]; the second one is lengthened, [æː]; and the third one is both lengthened (in fact, probably even more than the second one) and nasalized, [æ̃ː].

Exercise

1. What sounds are presented by the bolded letter(s) in the following words? Provide an allophonic (**narrow**) transcription.

   m**a**d, b**a**ck, s**p**ill, **c**at, t**a**ng

2. Try your hand at distinguishing allophones of phonemes. Using the discussion above as a guide, see if you can describe the phonetic differences between the allophones of the designated phoneme in the example words.

   a. /k/: kin, skin
   b. /ɛ/: bet, Ben
   c. /e/: rate, raid
   d. /æ/: bat, bad
   e. /l/: lead, pull
   f. /k/: cool, keel

PHONOLOGICAL RULES

As we saw above, a **phonological rule** is a general statement about the distribution of a phoneme's allophones, e.g., those of /t/. There are several types of phonological rules to represent the several patterns of distribution of sounds in a language.

The rule for the [tʰ] allophone of /t/ can be seen as adding extra breathiness after the release of a voiceless stop. This rule adds the aspiration feature to the consonant. Such rules are referred to as **feature addition rules**.

Exercise

Listen carefully to the sounds represented by the bolded letters in each of the following pairs of words: ***st**eal, **t**eal; s**p**in, **p**in; s**k**ate, **K**ate*. What phonetic difference can you hear between the [t] of *steal* and the

[t] of *teal*? Write the two sounds in narrow (allophonic) phonetic transcription. Where does each of these two sounds occur in the example words? Answer the same questions for the [p] of *spin* and *pin* and the [k] of *skate* and *Kate*. What general pattern applies to all three pairs of sounds? Express this general pattern as a phonological rule.

Feature changing rules change the value of a component feature of a sound, for instance, from non-nasal to nasal or from short to long. The nasal pronunciation of the vowel of *can* is due, as we've seen, to the influence of the nasal consonant /n/ that comes immediately after it. In this case, the rule changes an oral (non-nasal) sound to a nasal one.

Segment deletion rules remove sound segments. For instance, in informal speech, a segment deletion rule removes the second of a pair of consonants at the end of one word when the next word begins with a consonant. Thus words such as *frost* and *ask* are pronounced as [fras] and [æs] when they occur before consonants (e.g., *Ask Katie*). This effect is especially likely when the last consonant of the first word is phonetically similar to the first consonant of the next word, as in *used to* [jus tə], instead of [just tə], (which leads to the incorrect spelling *use to*). French adjectives which end in consonants routinely lose those consonants if the following word begins with a consonant: 'small friend' *petit ami* [pətit ami] vs. 'small book' *petit livre* [pəti livr].

Phonological rules may also reverse the order of segments in words. In some dialects of English the verb *ask* is pronounced as [æks], reversing [s] and [k]. Several hundred years ago, the word *bird*, now pronounced as [bərd] was pronounced [brɪd]. The vowel and the [r] switched places. Rules that reverse a sequence of segments are called **metathesis rules**.

Some rules, such as the vowel nasalization rule, make a segment and its neighbor more alike. Such rules are called **assimilation rules**.

Exercise

1. (a) Identify the rapid, natural pronunciation of the sound represented by the letter <n> in the words *input, intake,* and *inquest*. (b) Identify the sound immediately after the sound represented by <n> in each word. (c) In what ways are the sound represented by <n> and the sound immediately following it in each word similar? (d) Express the similarity between the members of the pairs of sounds in all three words in one general rule. (e) What kind of phonological rule is this?

2. Examine the rapid, natural pronunciation of <n> in the phrases below. Write each entire phrase phonemically. Then try to state a rule that accounts for the different pronunciations. What type of rule did you discover?

a. In Bill's house
b. In Ted's house
c. In Greg's house

3. Describe the phonetic difference between the allophones of /k/ (written as <c> and <k> in ordinary spelling) in the two columns of words:

coop	keep
could	kid
coat	Kate
cot	cat

Express the difference and the distribution of the allophones as a phonological rule. What kind of rule did you come up with?

Assimilation can be so thoroughgoing that two sounds can merge into one. For example, [t,d,s,z] are palatalized—i.e., pronounced [tʃ, dʒ, ʃ, ʒ] respectively—when they occur at the ends of words and the next word begins with the palatal glide [j]. For example, *Did you?* is typically pronounced as [dɪdʒə] or even [dʒə]; the [dʒ] results from the coalescence of [dj].

The study of phonology shows that languages make use of unpredictable units (phonemes) to differentiate words from each other. It also shows that languages employ very general patterns of sounds. By representing the general, predictable patterns as phonological rules, we leave only that information which is unpredictable and idiosyncratic to be listed in the set of phonemes. This way we minimize the number of basic phonemic units we need to posit; we also minimize the number of times any given piece of information is mentioned, thus simplifying the overall grammar or description of the language. For example, English has two series of vowels, those with and those without nasalization. The nasalized vowels occur only before nasal consonants; the non-nasalized ones occur everywhere else. If we merely listed all these vowels as belonging to the language, then we would have postulated far more basic units than we—or native speakers—really need. And we would have missed the generalization that the two series of vowels are really quite alike, one series being merely a predictable positional

variant of the other. We capture this generalization by eliminating the series of nasalized vowels from our inventory of basic units and replacing it with the nasalization rule.

Exercise

1. Arabic speakers learning English often produce [b] where English requires [p], e.g., saying "bark" instead of "park." Describe the phonetic difference between [b] and [p].

2. We noted that English has approximately 40 phonemes but only 26 letters of the ordinary alphabet to represent them. Illustrate with appropriate examples at least three ways in which the English spelling system uses those 26 letters to represent its almost 40 phonemes.

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GLOSSARY

AFFRICATE: sound produced with full stoppage of the airstream followed immediately by constriction.

ALLOPHONE: non-distinctive phonetic variant of a phoneme.

ALVEO-PALATAL: sound produced at the hard palate just behind the alveolar ridge.

ALVEOLAR: sound produced at the alveolar ridge, the bony ridge behind the teeth.

APPROXIMANTS: sounds produced when the articulators approach each other but not so closely as to cause turbulence in the airstream; they include laterals (the tongue touches the top of the mouth but the air is allowed to pass along one or both sides, as in [l]); central (the sides of the tongue are raised so that air flows along the center of the mouth, as in [r]); as well as the labiovelar [w] and palatal [j].

ASPIRATED: consonant sound released with a puff of air.

ASSIMILATION RULE: phonological rule that makes a sound similar to a nearby sound. e.g., palatalization.

BACK VOWEL: vowel produced with the back of the tongue raised toward the soft palate.

BILABIAL: sound produced with constriction or closure of the lips.

BROAD TRANSCRIPTION: the attempt to record pronunciation without regard to non-contrastive details. See **NARROW TRANSCRIPTION.**

CENTRAL: vowel—e.g., [ə]—produced with the tongue raised at the center of the mouth rather than at the front or back.

CODA: last part of a syllable; follows the nucleus.

COMPLEMENTARY DISTRIBUTION: when the allophones of a phoneme occupy different positions in words.

CONSONANT: sound produced with complete or partial obstruction of the air flow through the mouth. See **VOWEL.**

CONTRASTIVE (also **DISTINCTIVE**): sounds used in a language to signal differences of meaning.

DIACRITIC: phonetic symbols used to represent fine differences in pronunciation, e.g., the [ʰ] that indicates aspiration.

DIPHTHONG: vowel unit that begins with one oral configuration and ends with another. See **MONOPHTHONG.**

DISTINCTIVE: See **CONTRASTIVE.**

DISTRIBUTION: specific circumstances (**ENVIRONMENTS**) in which a sound oc-

curs, e.g., at the beginning, middle, or end of a word.

ENVIRONMENT: See **DISTRIBUTION**.

FEATURE CHANGING RULE: rule that changes the value of a component feature of a sound, e.g., from stop to fricative, from non-nasal to nasal, or from lax to tense.

FOOT: a rhythmic unit consisting of at least one stressed syllable and 1-2 other syllables, typically unstressed.

FRICATIVE: sound produced with constriction of the airstream, producing friction.

FRONT VOWEL: vowel produced with the front of the tongue raised toward the hard palate.

GLIDES: sounds, e.g., [j] and [w], that are intermediate in openness and sonority between consonants and vowels. Also called **SEMIVOWELS**.

GLOTTAL: sound produced by constricting or stopping the airstream at the vocal folds.

HIGH VOWEL: vowel pronounced with the mouth in the least degree of openness. See **MID VOWEL** and **LOW VOWEL**.

INTERDENTAL: sound produced with the tongue protruding between the teeth.

LABIODENTAL: sound produced with constriction between the bottom lip and top teeth.

LABIOVELAR: sound produced by raising the back of the tongue to or toward the velum and rounding the lips, e.g., [w].

LATERAL: sound produced with the tongue touching the top of the mouth with air allowed to pass along one or both sides, as in [l].

LAX: sound produced with musculature of the mouth relatively relaxed. See **TENSE**.

LOW VOWEL: vowel pronounced with the mouth in the greatest degree of openness. See **HIGH VOWEL** and **MID VOWEL**.

MANNER OF ARTICULATION: the kind of closure or constriction used in making a consonant sound.

METATHESIS RULE: phonological rule that reverses the order of segments in words.

MID VOWEL: vowel pronounced with the mouth in an intermediate degree of openness. See **HIGH VOWEL** and **LOW VOWEL**.

MINIMAL PAIR: two words of different meaning that are phonetically the same except for one sound, e.g., **p**it and **b**it (used to demonstrate that [p] and [b] contrast with each other).

MONOPHTHONG: vowel unit consisting of a single segment held constant during its pronunciation. See **DIPHTHONG**.

NARROW TRANSCRIPTION: attempt to record non-contrastive details of pronunciation. See **BROAD TRANSCRIPTION**.
NASAL, NASALIZED: sounds articulated with air flowing through the nasal cavity.
NON-CONTRASTIVE (also **NON-DISTINCTIVE**): sounds not used in a language to signal different meanings.
NUCLEUS: central part of a syllable, i.e., the segment with the highest sonority.
ONSET: initial part of a syllable; precedes the nucleus.
PHONEME: contrastive or distinctive sound category; distinguishes words from each other.
PHONETICS (**ARTICULATORY**): the study of how speech sounds are produced.
PHONOLOGICAL RULE: a general statement about the distribution of a phoneme's allophones and about other phonological processes.
PHONOLOGY: the study of the ways in which a given language shapes sounds into distinctive categories of perception and of its rules of pronunciation.
PLACE OF ARTICULATION: the area in the mouth at which the consonantal closure or constriction occurs.
RHYME: the nucleus and coda of a syllable.
ROUNDED: vowel sound produced with the lips pursed. See **UNROUNDED**.
SCHWA: a mid central unrounded vowel, represented as [ə].
SEGMENT DELETION RULE: phonological rule that eliminates a sound from pronunciation in a word or phrase.
SEMIVOWEL: see **GLIDE**.
SONORANT: sounds produced with a smooth airflow, allowing for a high degree of resonance.
STOP: sound produced with full stoppage of the airstream anywhere in the *oral* cavity from the vocal folds to the lips.
TENSE: sound produced with musculature of the mouth relatively tight. See **LAX**.
UNROUNDED: vowel produced without lip rounding. See **ROUNDED**.
VELAR: sound produced with constriction at the soft palate.
VOICED: sound produced with the vocal folds vibrating.
VOICELESS: sound produced with the vocal folds not vibrating.
VOWEL: sound produced with smooth, unobstruction air stream through the mouth. See **CONSONANT**.

5 Morphology and Word Formation

KEY CONCEPTS
Words and morphemes
Root, derivational, inflectional morphemes
Morphemes, allomorphs, morphs
Words
English inflectional morphology
English derivational morphology
Compounding
Other sources of words
Registers and words
Internal structure of complex words
Classifying words by their morphology

INTRODUCTION

This chapter is about words—their relationships, their constituent parts, and their internal organization. We believe that this information will be of value to anyone interested in words, for whatever reason; to anyone interested in dictionaries and how they represent the aspects of words we deal with here; to anyone involved in developing the vocabularies of native and non-native speakers of English; to anyone teaching writing across the curriculum who must teach the characteristics of words specific to their discipline; to anyone teaching writing who must deal with the usage issues created by the fact that different communities of English speakers use different word forms, only one of which may be regarded as standard.

Exercise

1. Divide each of the following words into their smallest meaningful parts:*landholder, smoke-jumper, demagnetizability.*

2. Each of the following sentences contains an error made by a non-native speaker of English. In each, identify and correct the incorrect word.

a. I am very relax here.
b. I am very boring with this game.
c. I am very satisfactory with my life.
d. Some flowers are very attracting to some insects.
e. Many people have very strong believes.

f. My culture is very difference from yours.
g. His grades proof that he is a hard worker.
h. The T-shirt that China drawing. (from a T-shirt package from China)

In general terms, briefly discuss what English language learners must learn in order to avoid such errors.

3. Some native speakers of English use forms such as *seen* instead of *saw, come* instead of *came, aks* instead of *ask, clumb* instead of *climbed, drug* instead of *dragged, growed* instead of *grew.* Are these errors? If they are, are they the same kinds of errors made by the non-native speakers of English listed in Exercise 2? If not, what are they?

WORDS AND MORPHEMES

In traditional grammar, words are the basic units of analysis. Grammarians classify words according to their parts of speech and identify and list the forms that words can show up in. Although the matter is really very complex, for the sake of simplicity we will begin with the assumption that we are all generally able to distinguish words from other linguistic units. It will be sufficient for our initial purposes if we assume that words are the main units used for entries in dictionaries. In a later section, we will briefly describe some of their distinctive characteristics.

Words are potentially complex units, composed of even more basic units, called morphemes. A **morpheme** is the smallest part of a word that has grammatical function or meaning (NB not the smallest unit of meaning); we will designate them in braces—{ }. For example, *sawed*, *sawn*, *sawing*, and *saws* can all be analyzed into the morphemes {saw} + {-ed}, {-n}, {-ing}, and {-s}, respectively. None of these last four can be further divided into meaningful units and each occurs in many other words, such as *look**ed***, *mow**n***, *cough**ing***, *bake**s***.

{Saw} can occur on its own as a word; it does not have to be attached to another morpheme. It is a **free morpheme**. However, none of the other morphemes listed just above is free. Each must be **affixed** (attached) to some other unit; each can only occur as a part of a word. Morphemes that must be attached as word parts are said to be **bound**.

Exercise

1. Identify the free morphemes in the following words:

kissed, freedom, stronger, follow, awe, goodness, talkative, teacher, actor.

2. Use the words above (and any other words that you think are relevant) to answer the following questions:

a. Can a morpheme be represented by a single phoneme? Give examples. By more than one phoneme? Give examples.
b. Can a free morpheme be more than one syllable in length? Give examples. Can a bound morpheme? Give examples.
c. Does the same letter or phoneme—or sequence of letters or phonemes—always represent the same morpheme? Why or why not? (Hint: you must refer to the definition of morpheme to be able to answer this.)
d. Can the same morpheme be spelled differently? Give examples.
e. Can different morphemes be pronounced identically? Give examples.
f. A morpheme is basically the same as:
    i. a letter
    ii. a sound
    iii. a group of sounds
    iv. none of the above

3. The words *district* and *discipline* show that the sequence of letters *d-i-s* does not always constitute a morpheme. (Analogous examples are ***mis**sion, **mis**sile, **be**gin,* and ***re**trofit*.) List five more sequences of letters that are sometimes a morpheme and sometimes not.

4. Just for fun, find some other pairs like *disgruntled* / **gruntled* and *disgusted* / **gusted*, where one member of the pair is an actual English word and the other should be a word, but isn't.

Affixes are classified according to whether they are attached before or after the form to which they are added. **Prefixes** are attached before and **suffixes** after. The bound morphemes listed earlier are all suffixes; the {re-} of *resaw* is a prefix. Further examples of prefixes and suffixes are presented in Appendix A at the end of this chapter.

Root, derivational, and inflectional morphemes

Besides being bound or free, morphemes can also be classified as root, derivational, or inflectional. A **root** morpheme is the basic form to which other

morphemes are attached. It provides the basic meaning of the word.The morpheme {saw} is the root of *sawers*. **Derivational** morphemes are added to forms to create separate words: {-er} is a derivational suffix whose addition turns a verb into a noun, usually meaning the person or thing that performs the action denoted by the verb. For example, {paint}+{-er} creates *painter*, one of whose meanings is "someone who paints."

Inflectional morphemes do not create separate words. They merely modify the word in which they occur in order to indicate grammatical properties such as plurality, as the {-s} of *magazine**s*** does, or past tense, as the {ed} of *babecu**ed*** does. English has eight inflectional morphemes, which we will describe below.

We can regard the root of a word as the morpheme left over when all the derivational and inflectional morphemes have been removed. For example, in *immovability*, {im-}, {-abil}, and {-ity} are all derivational morphemes, and when we remove them we are left with {move}, which cannot be further divided into meaningful pieces, and so must be the word's root.

We must distinguish between a word's root and the forms to which affixes are attached. In *moveable*, {-able} is attached to {move}, which we've determined is the word's root. However, {im-} is attached to *moveable*, not to {move} (there is no word *immove*), but *moveable* is not a root. Expressions to which affixes are attached are called **bases**. While roots may be bases, bases are not always roots.

Exercise

1. Can an English word have more than one prefix? Give examples. More than one suffix? For example? More than one of each? Give examples. Divide the examples you collected into their root, derivational, and inflectional morphemes.

2. Check your dictionary to see how it deals with inflected and derived word forms. Does it list all the inflections of regular inflected words? Just irregular ones? Does it accord derived forms their own entries or include them in the entries of the forms from which they are derived?

3. Does your dictionary list bound morphemes? Which kinds?

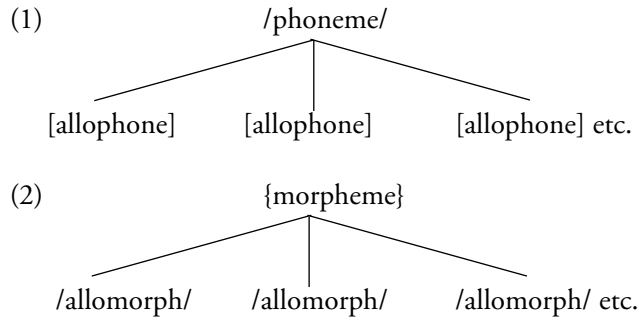
MORPHEMES, ALLOMORPHS, AND MORPHS

The English plural morpheme {-s} can be expressed by three different but

clearly related phonemic forms /əz/ or /ɪz/, /z/, and /s/. These three have in common not only their meaning, but also the fact that each contains an alveolar fricative phoneme, either /s/ or /z/. The three forms are in complementary distribution, because each occurs where the others cannot, and it is possible to predict just where each occurs: /ɪz/ after sibilants (/s, z, ʃ, ʒ, tʃ, dʒ/), /z/ after voiced segments, and /s/ everywhere else. Given the semantic and phonological similarities between the three forms and the fact that they are in complementary distribution, it is reasonable to view them as contextual pronunciation variants of a single entity. In parallel with phonology, we will refer to the entity of which the three are variant representations as a **morpheme**, and the variant forms of a given morpheme as its **allomorphs**. When we wish to refer to a minimal grammatical form merely as a form, we will use the term **morph**. Compare these terms and the concepts behind them with phoneme, allophone, and phone. (Hint: note the use of / /, [ ], and { }.)

Exercise

Consult the glossary in the chapter on Phonetics and Phonology and try to determine the meanings of the morphemes {phone}, {allo-}, and {-eme}.



WORDS

Words are notoriously difficult entities to define, both in universal and in language specific terms. Like most linguistic entities, they look in two directions—upward toward larger units of which they are parts (toward phrases), and downward toward their constituent morphemes. This, however, only helps us understand words if we already understand how they are combined into larger units or divided into smaller ones, so we will briefly discuss sev-

eral other criteria that have been proposed for identifying them.

One possible criterion is spelling: in written English text, we tend to regard as a word any expression that has no spaces within it and is separated by spaces from other expressions. While this is a very useful criterion, it does sometimes lead to inconsistent and unsatisfactory results. For instance, *cannot* is spelled as one word but *might not* as two; compounds (words composed of two or more words; see below) are inconsistently divided (cf. *influx*, *in-laws*, *goose flesh*, *low income* vs. *low-income*).

Words tend to resist interruption; we cannot freely insert pieces into words as we do into sentences. For example, we cannot separate the root of a word from its inflectional ending by inserting another word, as in **sock-**blue**-s* for *blue socks*. Sentences, in contrast, can be interrupted. We can insert adverbials between subjects and predicates: *John **quickly** erased his fingerprints*. By definition, we can also insert the traditional interjections: *We will, **I believe,** have rain later today.*

In English, though by no means in all languages, the order of elements in words is quite fixed. English inflections, for example, are suffixes and are added after any derivational morphemes in a word. At higher levels in the language, different orders of elements can differ in meaning: compare *John kissed Mary* with *Mary kissed John*. But we do not contrast words with prefixed inflections with words with suffixed inflections. English does not contrast, for example, *piece* + *s* with *s* + *piece*.

In English, too, it is specific individual words that select for certain inflections. Thus the word *child* is pluralized by adding {-ren}, *ox* by adding {-en}. So if a form takes the {-en} plural, it must be a word.

So **words** are units composed of one or more morphemes; they are also the units of which phrases are composed.

English inflectional morphology

Inflectional morphemes, as we noted earlier, alter the form of a word in order to indicate certain grammatical properties. English has only eight inflectional morphemes, listed in Table 1, along with the properties they indicate.

Except for {-en}, the forms we list in Table 1 are the **regular** English inflections. They are regular because they are the inflections added to the vast majority of verbs, nouns, adjectives, and adverbs to indicate grammatical properties such as tense, number, and degree.

They are also the inflections we typically add to new words coming into the language, for example, we add {-s} to the noun *throughput* to make it plural. When we borrow words from other languages, in most cases we add the regular English inflections to them rather than borrow the inflections

they had in their home languages; for example, we pluralize *operetta* as *operetta**s*** rather than as *operett**e*** as Italian does; similarly, we sing *oratorio**s*** rather than *orator**i***. [Thanks to Paula Malpezzi-Price for help with these examples.] The regular inflections are the default inflections that learners tend to use when they don't know the correct ones (for example, *growed* rather than *grew*).

nouns:	{-s}	plural	(the bird**s**)
noun phrases:	{-s}	genitive/possessive	(the bird**'s** song)
adjectives/adverbs:	{-er}	comparative	(fast**er**)
	{-est}	superlative	(fast**est**)
verbs: {-s}	3rd person singular present tense		(prove**s**)
{-ed}	past tense		(prov**ed**)
{-ing}	progressive/present participle		(is prov**ing**)
{-en}	past participle		(has prov**en**)
			(was prov**en**)

TABLE 1: THE EIGHT ENGLISH INFLECTIONAL MORPHEMES

[Note: the regular past participle morpheme is {-ed}, identical to the past tense form {-ed}. We use the irregular past participle form {-en} to distinguish the two.]

However, because of its long and complex history, English (like all languages) has many **irregular** forms, which may be irregular in a variety of ways. First, irregular words may use different inflections than regular ones: for example, the modern past participle inflection of a regular verb is {-ed}, but the past participle of *freeze* is *froz**en*** and the past participle of *break* is *brok**en***. Second, irregular forms may involve internal vowel changes, as in *man/men*, *woman/women*, *grow/grew*, *ring/rang/rung*. Third, some forms derive from historically unrelated forms: *went*, the past tense of *go*, historically was the past tense of a different verb, *wend*. This sort of realignment is known as **suppletion**. Other examples of suppletion include *good*, *better*, and *best*, and *bad*, *worse*, and *worst*. (As an exercise, you might look up *be*, *am*, and *is* in a dictionary that provides etymological information, such as the American Heritage.) Fourth, some words show no inflectional change: *sheep* is both singular and plural; *hit* is both present and past tense, as well as past participle. Fifth, many borrowed words, especially nouns, have irregular inflected forms: *alumnae* and *cherubim* are the plurals of *alumna* and

cherub, respectively.

Irregular forms demonstrate the abstract status of morphemes. Thus the word *men* **realizes** (represents, makes real) the two morphemes {man} and {plural}; *women* realizes {woman} and {plural}; *went* realizes {go} and {past tense}. Most grammar and writing textbooks contain long lists of these exceptions.

As a final issue here we must note that different groups of English speakers use different inflected forms of words, especially of verbs. When this is the case, the standard variety of the language typically selects one and rejects the others as non-standard, or, illogically, as "not English," or worse. For example, many English speakers use a single form of *be* in the past tense (*was*) regardless of what the subject of its clause is. So they will say, *We was there yesterday*. This is an uncontroversial issue: *was* in instances like this is universally regarded as non-standard. Other forms are more controversial. For example, what is the past tense of *dive—dived* or *dove*? How are *lie* and *lay* to be used? How does your dictionary deal with such usage issues?

Exercise

1. Can you think of a reliable way to distinguish the past tense and past participle of a verb, regardless of whether it is regular or irregular? (Hint: think of words or classes of words that often occur with these forms.)

2. Check a reference grammar for further examples of irregular inflections. Also, for an excellent discussion of this and related issues, read Pinker (1999).

3. From the following words, determine the three distinct pronunciations or allomorphs of the past tense morpheme {-ed}: *towed, sighed, tapped, tabbed, tossed, buzzed, raided*. Specify the phonological environment in which each allomorph occurs. (Hints: look at the last sound of the word to which the morpheme is added and think of the allomorphs of the plural morpheme discussed earlier.)

4. Pinker (1999) notes that children learning English as their native language sometimes produce forms like *goed* and *readed*. Why do you think they do this?

5. Would you expect adult non-native learners of English to produce

forms similar to those of native speaking children? What further difficulties might non-native speakers have that native English-speaking children might not have? (Hints: think of the frequency of irregular forms in English and think of your own experience in learning a second language.)

English derivational morphology

Derivation is the process of creating separate but morphologically related words. Typically, but not always, it involves one or more changes in form. It can involve prefixing, as in *resaw*, and suffixing, as in *sawing*, *sawer*, *sawable*.

Another type of derivation, while not visible, is at least audible. It involves a change in the position of the primary stress in a word. Compare:

(3)	ˈpermit (noun)	perˈmit (verb)
	ˈcontact (noun)	conˈtact (verb)
	ˈperfect (adj.)	perˈfect (verb)
	ˈconvert (noun)	conˈvert (verb)

In some derivationally related word pairs, only a feature of the final consonant changes, usually its voicing:

(4)	advice	advise	/s/ → /z/
	belief	believe	/f/ → /v/
	mouth	mouthe	/θ/ → /ð/
	breath	breathe	/θ/ → /ð/

In some cases adding a derivational morpheme induces a change in a stressed vowel:

(5)	divine	divinity	/aɪ/ → /ɪ/
	profane	profanity	/e/ → /æ/
	serene	serenity	/i/ → /ɛ/

In other cases, the addition of a suffix triggers a change in the final consonant of the root. For example, an alveolar consonant becomes palatal with the same voicing value:

(6)	part	partial	/t/ → /ʃ/
	face	facial	/s/ → /ʃ/

seize	seizure	/z/ → /ʒ/
remit	remission	/t/ → /ʃ/

In a multi-syllabic word with a stressed tense vowel, the palatalization may be accompanied by a laxing of that vowel:

(7)	collide	collision	/d/ → /ʒ/	/aɪ/ → /ɪ/
	elide	elision	/d/ → /ʒ/	/aɪ/ → /ɪ/

Sometimes the addition of a derivational affix requires a change in the stress pattern, with consequential changes in the pronunciations of the vowels. In most cases an unstressed vowel is pronounced as schwa:

(8)	ˈtelegraph	teˈlegraphy
	ˈregal	reˈgalia
	ˈtutor	tuˈtorial

In still other cases we find suffixing, stress migration with change of vowel quality, and change of consonant:

(9)	apˈprove	appro'bation	/u/ → /ə/	/v/ → /b/

Additionally, English allows us to change a word's part of speech without any change of form. As a result, identical forms may belong to different parts of speech, e.g., *saw* the noun and *saw* the verb:

(10) a. This saw is too dull. (noun)
b. Don't saw that board. (verb)

Other examples include *hit*, *buy*, *dust*, *autograph*, *brown-bag*, which can all be both verbs and nouns. Change of part of speech without any corresponding formal change is called **conversion (**also **functional shift** or **zero derivation**). There is more on this topic in our chapter on Major Parts of Speech.

Exercise

1. Write each of the example words in (3)-(9) in a phonemic notation.

2. True or False?
   a. Every English word contains at least one root.
   b. In English, derivational morphemes occur before inflectional morphemes.
   c. In English, derivational suffixes regularly occur before inflectional suffixes.
   d. In English, a few inflectional morphemes can occur as prefixes.
   e. Every root in English is a free morpheme (i.e., there is no such thing as a bound root.) (Hint: consider *receive, deceive, conceive, perceive*.)
   f. In English, some morphemes have both a free and a bound allomorph. (Hint: consider *able, ability; France, Franco-*.)

3. a. In a broad phonetic (phonemic) transcription, transcribe the sounds represented by the bolded letters in ***im**possible, **in**edible, **il**legible, **ir**responsible*.
   b. What meaning do these pairs of letters have in common?
   c. What is the first sound in all four pairs of sounds?
   d. What are the second sounds in the pairs of sounds?
   e. Why does the second sound vary as it does?
   f. How would you analyze this variation in terms of morphemes and allomorphs?

4. As English readily allows conversion, you should have no trouble compiling a list of ten pairs of words with identical forms but different parts of speech. For each pair of words, create a pair of short sentences that show that the words do belong to different parts of speech.

As we'll see in more detail in the next chapter, words belonging to different parts of speech take different inflections—e.g., $\{_{N}$saw$\}$ + $\{_{pl}$-s$\}$; $\{_{V}$saw$\}$ + {-ed}. Because derivationally related forms often belong to different parts of speech and consequently allow different inflections, and because the meanings of derivationally related pairs are not always as parallel as their forms are, derived forms may be given their own entries in dictionaries. Webster's New World Dictionary, for instance, has separate entries for *generate* and *generation* and for *compete* and *competence*. Look up these words in your own dictionary and note how the meanings of *generation* and *competence* are not entirely predictable from those of *generate* + {-ion} and *compete* + {-ence},

respectively.

The term **word family** is often used for a set of words that are related to each other derivationally or inflectionally, though the term is also used to refer to any set of words that rhyme with each other.

Compounding

The italicized words in (11) are created by combining *saw* with some other word, rather than with a bound morpheme.

(11) a. A *sawmill* is a noisy place.
b. Every workshop should have a *chain saw*, a *table saw,* a *jig-saw*, a *hack saw*, and a *bucksaw.*
c. *Sawdust* is always a problem in a woodworker's workshop.
d. *Sawing horses* are useful and easily made.

Such words are called **compounds**. They contain two or more words (or more accurately, two or more roots, all, one, or none of which may be bound; cf. *blueberry* with two free morphemes, and *astronaut* with two bound morphemes). Generally, one of the words is the head of the compound and the other(s) its modifier(s). In *bucksaw*, *saw* is the head, which is modified by *buck*. The order is significant: compare *pack rat* with *rat pack*. Generally, the modifier comes before the head.

In ordinary English spelling, compounds are sometimes spelled as single words, as in *sawmill*, *sawdust*; sometimes the parts are connected by a hyphen, as in *jig-saw*; and sometimes they are spelled as two words, as in *chain saw*, *oil well*. (Dictionaries may differ in their spellings.) Nonetheless, we are justified in classifying all such cases as compound words regardless of their conventional spelling for a variety of reasons.

First, the stress pattern of the compound word is usually different from the stress pattern in the phrase composed of the same words in the same order. Compare:

(12)

COMPOUND	PHRASE
ˈWhite House	white ˈhouse
ˈfunny farm	funny ˈfarm
ˈblackbird	black ˈbird
ˈflatcar	flat ˈcar

Exercise

Very bad teenager joke:
Q: How do you make a cat drink?
A: Put it in a blender.
What are the verbal tricks here?

In the compounds the main stress is on the first word; in the phrases the main stress is on the last word. While this pattern does not apply to all compounds, it is so generally true that it provides a very useful test.

Second, the meaning of the compound may differ to a greater or lesser degree from that of the corresponding phrase. A *blackbird* is a species of bird, regardless of its color; a *black bird* is a bird which is black, regardless of its species. A *trotting-horse* is a kind of horse, regardless of its current activity; *a trotting horse* must be a horse that is currently trotting. So, because the meanings of compounds are not always predictable from the meanings of their constituents, dictionaries often provide individual entries for them. They do not do this for phrases, unless the meaning of the phrase is **idiomatic** and therefore not derivable from the meanings of its parts and how they are put together, e.g., *raining cats and dogs*. Generally the meaning of a phrase is predictable from the meanings of its constituents, and so phrases need not be listed individually. (Indeed, because the number of possible phrases in a language is infinite, it is in principle impossible to list them all.)

Third, in many compounds, the order of the constituent words is different from that in the corresponding phrase:

(13)

COMPOUND	PHRASE
sawmill	mill for sawing
sawing horse	horse for sawing
sawdust	dust from sawing

Fourth, compound nouns allow no modification to the first element. This contrasts with noun phrases, which do allow modification to the modifier: compare **a really-blackbird* and *a really black bird*.

There are a number of ways of approaching the study and classification of compound words, the most accessible of which is to classify them according to the part of speech of the compound and then sub-classify them according to the parts of speech of its constituents. Table 2 is based on discussion in Bauer (1983).

1. Compound nouns
   a. Noun + noun: bath towel; boy-friend; death blow
   b. Verb + noun: pickpocket; breakfast
   c. Noun +verb: nosebleed; sunshine
   d. Verb +verb: make-believe
   e. Adjective + noun: deep structure; fast-food
   f. Particle + noun: in-crowd; down-town
   g. Adverb + noun: now generation
   h. Verb + particle: cop-out; drop-out
   i. Phrase compounds: son-in-law
2. Compound verbs
   a. Noun + verb: sky-dive
   b. Adjective + verb: fine-tune
   c. Particle + verb: overbook
   d. Adjective + noun: brown-bag
3. Compound adjectives
   a. Noun + adjective: card-carrying; childproof
   b. Verb + adjective: fail safe
   c. Adjective + adjective: open-ended
   d. Adverb + adjective: cross-modal
   e. Particle + adjective: over-qualified
   f. Noun + noun: coffee-table
   g. Verb + noun: roll-neck
   h. Adjective + noun: red-brick; blue-collar
   i. Particle + noun: in-depth
   j. Verb + verb: go-go; make-believe
   k. Adjective/Adverb + verb: high-rise;
   l. Verb + particle: see-through; tow-away
4. Compound adverbs
   uptightly
   cross-modally
5. Neo-classical compounds
   astro-naut
   hydro-electric
   mechano-phobe

TABLE 2: ENGLISH COMPOUNDS (BAUER, 1983)

An alternative approach is to classify compounds in terms of the semantic relationship between the compound and its head. The head of a com-

pound is the constituent modified by the compound's other constituents. In English, heads of compounds are typically the rightmost constituent (excluding any derivational and inflectional suffixes). For example, in *traffic-cop* the head is *cop,* which is modified by *traffic;* in *line-backer* the head is *backer,* which is modified by *line.* Linguists distinguish at least three different semantic relations between the head and modifier(s) of compounds.

First, the compound represents a subtype of whatever the head represents. For instance, a *traffic-cop* is a kind of cop; a *teapot* is a kind of pot; a *fog-lamp* is a kind of lamp; a *blue-jay* is a kind of jay. That is, the head names the type, and the compound names the subtype. These are called **endocentric compounds**.

Second, the compound names a subtype, but the type is not represented by either the head or the modifier in the compound. For example, *Deadhead, redhead,* and *pickpocket* represent types of people by denoting some distinguishing characteristic. There is typically another word, not included in the compound, that represents the type of which the compound represents the subtype. In the case of *Deadhead, redhead,* and *pickpocket* this other word is *person,* so a *Deadhead* is a person who is an enthusiastic fan of the band *The Grateful Dead.* These are called **exocentric compounds**.

Third, there are compounds in which both elements are heads; each contributes equally to the meaning of the whole and neither is subordinate to the other, for instance, *bitter-sweet.* Compounds like these can be paraphrased as both X and Y, e.g., "bitter and sweet." Other examples include *teacher-researcher* and *producer-director.* These can be called **coordinative compounds**.

Exercise

For each set of words below, say whether the words are endocentric, exocentric, or coordinative compounds. Justify your identification.

a. redneck, yellowjacket, cocktail, blackhead
b. armchair, breathtest, rockopera
c. secretary-treasurer, scholar-administrator

As a third (and final) possible mode of analyzing compounds we briefly consider that used in the series of modern traditional grammars prepared by Quirk, Greenbaum, Leech and Svartvik (1972, 1985). In this method, the compounds are analyzed and classified according to the relationships among their constituents when the meaning of the compound is expressed

as a phrase or clause. For example:

PHRASES	
bee-sting	a sting by a bee
blood-test	a test of blood
swimming pool	a pool for swimming
adding machine	a machine for adding
girlfriend	a friend who is a girl
killer shark	a shark which is a killer
windmill	a mill powered by wind
motorcycle	a cycle powered by a motor
self-control	someone able to control self
CLAUSES	
sunrise	when the sun rises

TABLE 3: UNDERLYING SYNTACTIC/SEMANTIC ANALYSIS OF ENGLISH COMPOUNDS

Exercise

Paraphrase each of the following compounds according to at least one of the patterns in Table 3.

babysitter, catfish, cry-baby, story-teller, dancing girl, darkroom, doorknob, taxpayer, security officer, sleepwalking

Other sources of words

Besides derivation and compounding, languages make use of coining, abbreviating, blending, and borrowing to create new words.

Coining is the creation of new words without reference to the existing morphological resources of the language, that is, solely out of the sounds of the language. Coining is very rare, but *googol* [note the spelling] is an attested example, meaning 10^{100}. This word was invented in 1940 by the nine-year-old nephew of a mathematician (see Compact Edition of the Oxford English Dictionary Vol. III Supplement to the OED Vols. I-IV: 1987 p. 317).

Abbreviation involves the shortening of existing words to create other words, usually informal versions of the originals. There are several ways to abbreviate. We may simply lop off one or more syllables, as in *prof* for *professor, doc* for *doctor.* Usually the syllable left over provides enough information

to allow us to identify the word it's an abbreviation of, though occasionally this is not the case: United Airlines's low cost carrier is called *Ted.* (Go figure!) Alternatively, we may use the first letter of each word in a phrase to create a new expression, an **acronym**, as in UN, US, or SUV. In these instances the acronym is pronounced as a sequence of letter names. In other instances, such as *UNICEF* from *United Nations International Children's Emergency Fund,* the acronym can be pronounced as an ordinary English word. Advertisers make prolific use of acronyms and often try to make them pronounceable as ordinary words.

Blending involves taking two or more words, removing parts of each, and joining the residues together to create a new word whose form and meaning are taken from the source words. *Smog* derives from *smoke* and *fog* and means a combination of these two substances (and probably lots of others); *motel* derives from *motor* and *hotel* and refers to hotels that are convenient in various ways to motorists; *Prevacid* derives from *prevent acid*; *eracism* derives from *erase* and *racism* and means erase racism or, if read against the grain, electronic racism (cf. *email, ecommerce, E-trade*); *webinar* derives from *(worldwide) web* and *seminar*. In November 2007, an interviewee on an NPR news item created the blend *snolo* to refer to playing bike polo in the snow.

Borrowing involves copying a word that originally belonged in one language into another language. For instance, many terms from Mexican cuisine, like *taco* and *burrito,* have become current in American English and are spreading to other English dialects. Borrowing requires that the borrowing language and the source language come in contact with each other. Speakers of the borrowing language must learn at least some minimum of the source language for the borrowing to take place. Over its 1500 year history English has borrowed from hundreds of languages, though the main ones are Latin (*homicide*), Greek (*chorus*), French (*mutton*), Italian (*aria*), Spanish (*ranch*), German (*semester*), and the Scandinavian languages (*law*). From Native American languages, American English has borrowed place names (*Chicago*), river names (*Mississippi*), animal names (*opossum*), and plant names (*hickory*).

The borrowed word never remains a perfect copy of its original. It is made to fit the phonological, morphological, and syntactic patterns of its new language. For example, the Spanish pronunciation of *burritos* is very different from the English pronunciation. At the very least, the two languages use different /r/s and /t/s, and the plural marker {-s} is voiced in English but voiceless in Spanish.

See our chapter on the History of the English Language in Book II for

more on borrowing.

REGISTERS AND WORDS

Although most of the words we use every day can be used in almost any context, many words of the language are restricted to uses in certain fields, disciplines, professions, or activities, i.e., **registers**. For example, the word *phoneme* is restricted to the linguistic domain. Interestingly, some words may be used in several domains with a different meaning in each, though these meanings may be a specific version of a more general meaning. For example, the word *morphology* is used in linguistics to refer to the study of the internal structure of words and their derivational relationships; in botany to refer to the forms of plants; in geology to refer to rock formations. The general, abstract meaning underlying these specific meanings is the study of form.

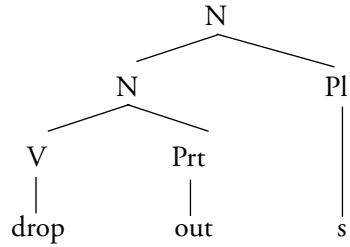
Besides words that may be used in almost any context and those that are technical or discipline specific, there are words that play important roles in academic discourses generally, for example, *accuracy; basis; concept* and its related forms, *conception, conceptual, conceptualize; decrease; effect; factor; indicate* and its related forms, *indication, indicative;* and *result*. As such words are used across disciplines, generally without local idiosyncrasies of meaning, they are important words for English learners, both native and non-native speakers. For a useful overview of the attempts to create lists of such **academic** (or **subtechnical**) **words** and a new list of them, see Coxhead (2000) and the references therein (another academic word).

THE INTERNAL STRUCTURE OF COMPLEX WORDS

Complex words (those composed of more than one morpheme) are not merely unstructured sequences of morphemes. For example, the plural {-s} suffix on *dropouts* must be added to the entire compound *dropout*, not to *out* to which *drop* is then added. The reason for this is that the plural suffix may be attached to nouns, but not to verbs or particles. *Drop* and *out* constitute a noun only after they have been brought together in the compound.

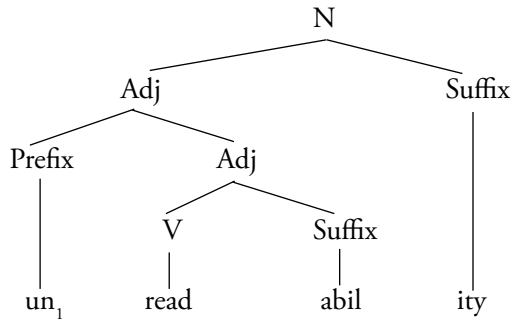
We can use brackets with subscripts to represent these relations: $[_N[_N[_V\text{drop}][_{Prt}\text{out}]]\text{s}]$. Alternatively, and equivalently, we can use tree diagrams to indicate the parts (constituents) of complex words and their structural relations:

(14)



Consider another example: *unreadability*. We analyze this word as $[_{N}[_{Adj}un_{1}[_{Adj}[_{V}$read]abil]]ity], represented by the following tree:

(15)



Let's consider this analysis more closely. The suffix {-able} attaches to verbs to create adjectives. Besides *readable* we have the adjectives *doable*, *manageable*, and *attachable*, which are derived from the verbs *read*, *do*, *manage*, and *attach*, respectively. We can represent this part of the word as: $[_{Adj}[_{V}$read] able].

The prefix {un_1-} attaches to adjectives, meaning "not" or "the converse of." Compare *unwise*, *unfair*, *ungrateful*, *uncomfortable*, *unmanageable* with *unreadable*. All can be glossed as not having the quality denoted by the adjective to which they are attached: "not comfortable," "not fair," etc. This morpheme must be distinguished from the prefix {un_2-} meaning "to reverse the action," which can be attached only to verbs (e.g., *untie*).

{Un_1-} cannot attach to the verb *read*; although there is the word *unread*, pronounced [ənrɛd], not [ənrid], an adjective meaning "not read" and derived from the past participle of *read*. Consequently, in *unreadable*, {-able} must be attached to {read} to create the adjective *readable*. {Un_1-} may then be attached to *readable* to create *unreadable*. We will represent this part of the word as: $[_{Adj}un_{1}[_{Adj}[_{V}$read]able]].

The suffix {-ity} attaches to adjectives to create abstract nouns. Consequently it must be attached to the adjective *unreadable*. The structure of

the entire word therefore must be: $[_{N}[_{Adj}un_{1}[_{Adj}[_{V}read]able]]ity]$, as specified above. In pronunciation the morpheme {-able} will be assigned its allomorph /əbɪl/ (spelled <abil>, the same allomorph that appears in *ability*).

Exercise

Provide an analysis tree for each of the following words: *retry, sinkable, thoughtless, meaningfulness, microorganisms*.

CLASSIFYING WORDS BY THEIR MORPHOLOGICAL PROPERTIES

Once the morphemes of a language have been identified, their allomorphs determined, and their distributions specified, we can use our analysis to assign the words of a language to parts of speech. For many words, inflections provide the main basis of this assignment. Refer to Table 1 for the list of English inflections.

Nouns can be identified as those words that can be inflected for plural.

Verbs are words that can be inflected for 3rd person singular present tense, past tense, past participle, and progressive. These forms are often referred to as the principal parts of the verb.

Short adjectives and adverbs are words that can be inflected for comparative and superlative.

Derivational regularities can also be used to classify words. We can, for example, classify as adverbs words derived from adjectives by the addition of the suffix {-ly}, e.g., *quickly*.

Classifying words on the basis of their internal morphological structure works only up to a point. There are lots of words that are not internally complex and so cannot be classified without recourse to other types of criteria. For example, the preposition *to* has no internal morphological structure and so cannot be assigned to a grammatical class on that basis. Likewise, adverbs such as *hard* or *fast* lack the characteristic {-ly} ending. It becomes necessary to use other criteria to classify these and many other words. We consider in detail the principles which have been proposed for assigning words to parts of speech in the chapters on Major and Minor Parts of Speech in this book.

Exercise

1. Discuss two relatively reliable criteria (don't use spelling) for distinguishing words from morphemes and phrases. Illustrate your discussion

with appropriate examples.

2. Derivation displays a range of patterns in English. Discuss three different derivational patterns, illustrating your description with appropriate examples.

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GLOSSARY

AFFIX: an inflectional or derivational morpheme; to attach an inflectional or derivational morpheme to an expression.

ALLOMORPH: variant phonological representation of a morpheme.

AUXILIARY VERB: a verb other than the main verb of a clause.

BASE: part of word to which an affix may be attached; may but need not be a **root** morpheme.

BOUND MORPHEME: a morpheme that must be attached to another morpheme.

CONSTITUENT: a unified part of a construction (e.g., of a word, phrase, or sentence).
CONVERSION: derivational relationship between two words of different parts of speech but without any formal marking of the difference.
COORDINATIVE COMPOUND: a compound word that denotes an entity or property to which both constituents contribute equally; e.g., *bittersweet* refers to a quality which is both bitter and sweet.
DERIVATION: process of changing a word from one part of speech to another or from one subclass to another, typically by making some change in form.
ENDOCENTRIC COMPOUND: a compound word that denotes a subtype of whatever is denoted by the head. *Armchair* represents a type of chair; *breath-test* represents a kind of test.
EXOCENTRIC COMPOUND: a compound word that denotes a subtype of a category that is not mentioned within the compound; e.g., *pickpocket* represents a kind of person, not a kind of pocket nor a kind of pick.
FREE MORPHEME: a morpheme that need not be attached to another morpheme, but can constitute a word on its own.
HEAD: the main constituent of a compound, which may be modified by the compound's other constituents.
INFLECTIONAL MORPHEME: a bound morpheme that signals a grammatical function and meaning in a specific sentence, e.g., plural {-s}, past tense {-ed}, comparative {-er}, superlative {-est}.
MORPH: a minimal meaningful form, regardless of whether it is a morpheme or allomorph.
MORPHEME: the smallest part of a word that has meaning or grammatical function.
PREFIX: a bound morpheme attached before a root.
REALIZATION: the representation of one or more abstract elements (e.g., morphemes) by concrete elements (e.g., sounds); e.g., *women* represents the morphemes {woman} + {PLURAL}.
ROOT: the basic constituent of a word, to which other morphemes are attached.
SUFFIX: a bound morpheme attached after a root.
SUPPLETION: irregular inflectional forms of a word resulting from the combination of historically different sources; e.g., *go/went.*

APPENDIX A: SOME ENGLISH DERIVATIONAL MORPHEMES

(See Beers 2003: Appendixes D and E for other lists of roots and derivational affixes.)

Prefixes

Class/category changing

a-blaze	Adj < V
be-calm	V < Adj
be-friend	V < N
en-tomb	V < N

Class maintaining

Nouns
- arch-monetarist
- mal-nutrition
- micro-dot
- mini-dress
- step-father

Verbs
- de-escalate

Adjectives
- a-typical
- cis-lunar
- extra-sensory

Noun or Verb
- fore-ground
- bacl-ground
- mis-fortune
- mis-lead
- re-arrangement

Noun or Adjective
- ex-President
- ex-orbital
- in-definite
- mid-morning
- mid-Victorian

Verb or Adjective

circum-navigate
circum-polar

Noun, Verb, or Adjective
co-author
counter-culture
counter-demonstrate
counter-intuitive
dis-ambiguate
dis-bound
dis-information
inter-mix
sub-conscious
sub-let

Suffixes

Creating Nouns

from Nouns

-dom	king-dom
-er	Birch-er
-ess	lion-ess
-ette	kitchen-ette
-iana	Victor-iana
-hood	man-hood
-ism	absentee-ism
-let	stream-let
-ling	duck-ling
-scape	sea-scape
-ship	kin-ship

from Verbs

-al	arriv-al
-ary	dispens-ary
-ation (esp. with -ize)	categor-iz-ation
-ee	blackmail-ee
-er	kill-er
-ment	manage-ment
-ure	clos-ure

from Adjectives

-ce	dependen-ce
-cy	excellen-cy
-dom	free-dom
-er	six-er
-hood	false-hood
-ist	social-ist
-ity	divin-ity
-ness	good-ness
-th	warm-th

Derived Verbs

from Nouns

-fy	metr-ify
-ize	Cambodian-ize

from Adjectives

-en	short-en

Derived Adjectives

from Nouns

-al	education-al (allomorphs/allographs: -ial, -ual: presidential, habitual)
-ate	passion-ate
-en	wood-en
-ese	Peking-ese
-esque	pictur-esque
-ful	doubt-ful
-ic	algebra-ic
-less	clue-less
-ly	friend-ly
-ous	venom-ous
-y	catt-y

from Verbs

-able	unbeliev-able
-less	count-less

-ant/-ent	absorb-ent
-atory	affirm-atory
-ful	resent-ful
-ive	generat-ive

from Adjectives

-ish	green-ish
-ly	good-ly

Derived Adverbs

-ly	slow-ly
-ward(s)	in-ward(s)
-wise	length-wise

Miscellaneous

down-er
iff-y, upp-itty
in-ness, much-ness, such-ness,
there-ness, why-ness
thus-ly

6 The Major Parts of Speech

KEY CONCEPTS
Parts of Speech
Major Parts of Speech
Nouns
Verbs
Adjectives
Adverbs
Appendix: prototypes

INTRODUCTION

In every language we find groups of words that share grammatical characteristics. These groups are called "parts of speech," and we examine them in this chapter and the next. Though many writers on language refer to "the eight parts of speech" (e.g., Weaver 1996: 254), the actual number of parts of speech we need to recognize in a language is determined by how fine-grained our analysis of the language is—the more fine-grained, the greater the number of parts of speech that will be distinguished. In this book we distinguish nouns, verbs, adjectives, and adverbs (the major parts of speech), and pronouns, wh-words, articles, auxiliary verbs, prepositions, intensifiers, conjunctions, and particles (the minor parts of speech).

Every literate person needs at least a minimal understanding of parts of speech in order to be able to use such commonplace items as dictionaries and thesauruses, which classify words according to their parts (and sub-parts) of speech. For example, the American Heritage Dictionary (4th edition, p. xxxi) distinguishes adjectives, adverbs, conjunctions, definite articles, indefinite articles, interjections, nouns, prepositions, pronouns, and verbs. It also distinguishes transitive, intransitive, and auxiliary verbs. Writers and writing teachers need to know about parts of speech in order to be able to use and teach about style manuals and school grammars. Regardless of their discipline, teachers need this information to be able to help students expand the contexts in which they can effectively communicate.

A part of speech is a set of words with some grammatical characteristic(s) in common and each part of speech differs in grammatical characteristics from every other part of speech, e.g., nouns have different properties from verbs, which have different properties from adjectives, and so on. Part of speech analysis depends on knowing (or discovering) the distinguishing properties of the various word sets. This chapter describes several kinds of properties that separate the major parts of speech from each other and de-

scribes several ways in which to identify a word's part of speech.

THE MAJOR PARTS OF SPEECH: NOUNS, VERBS, ADJECTIVES, ADVERBS

The major parts of speech contribute the major "content" to a message, and hence are sometimes called **content words**, as opposed to other parts of speech known as **function** or **structure words**. The content words are the ones that we see in newspaper headlines where space is at a premium and they are the words we tend to keep in text messaging where costs per word can be high. However, in most types of discourse, function words significantly outnumber content words.

We begin our discussion of each part of speech by examining its traditional definition, which is generally either semantic or functional. We evaluate the traditional treatment and suggest more effective means of classifying the word type by referring to its formal characteristics. These include a word's potential inflectional morphology, its actual derivational morphology, and the positions in phrases and clauses in which it may occur. For example, the word *kingdom* is a noun because it can be inflected for plural (*kingdom**s***); it ends in the noun creating suffix *-dom*; and it can occur after *the* (*the kingdom*). We also examine some of the major functions of each part of speech. Each section concludes with a discussion of subclasses of the larger class.

Nouns

Traditionally, a noun is defined as a word that names "a person, place, thing, or idea" (Weaver 1996: 252). This defines the noun category according to what its members are assumed to typically denote, so it is a meaning-based or semantic definition. (Occasionally this definition gets abbreviated to "a noun is a person, place, or thing," which makes no sense at all!) By Weaver's definition, *Madonna, Pittsburgh*, and *Godzilla* are all nouns, which is correct, so the definition provides a useful start. However, if we apply it precisely (and to be worth keeping, definitions should be precisely applicable), then the word *desk* is not a noun because it denotes, not **a** thing, but a whole class of things. Most nouns are like *desk* in this regard—*peacock* denotes not a peacock but all the peacocks living now, as well as all those that existed before, all those that will ever exist, and all the peacocks that we merely imagine. If we want to refer to one peacock, we have to add a modifier such as *a—a peacock*, cf. *a desk*, *a book*, *a hard drive*. We might revise our definition to take such nouns into account—"nouns name classes of persons, places, things, and ideas." But now we require *Pittsburgh* to refer not to one

Pittsburgh, but to a whole set of them, which doesn't seem quite right.

So, there is something right about saying that nouns name classes of things, but there also seem to be nouns that name individual things. The nouns that name classes of things are **common** nouns; the nouns (and other types of expression) that name individual things are **proper** nouns: *printer* is a common noun; *Denver* is a proper noun. In English, we conventionally capitalize the initial letter of proper nouns. A common noun can be turned into a proper noun, in which case it should be capitalized; for instance, we have a friend whose dog's name is *Dog*. Similarly, we can distinguish *god* (of which there may be many) from *God* (which is presumed to be unique—at least in some contexts).

Proper nouns name individual things. But these things are many and varied. They include individual people (*Madonna*), individual animals (*Lassie*), individual places (*Addis Ababa*); individual things (*Earth*). We'll have a lot more to say about proper names in our chapter on Phrases.

We've said that common nouns name classes of things, but this needs development. Certainly, books are things, but is grease a thing? *Thing* seems to us to denote only things that can be individuated and counted—*thing one, thing two*; *one potato, two potatoes*, and so on. But *grease* doesn't seem to allow this; we don't (at least not typically) say *two greases*, or even just *one grease*. *Grease* is like *milk* and *information* and lots of other similar words in that it seems to denote stuff (physical or mental) rather than individual things. So, we might revise our definition of noun again, and say that "common nouns name classes of things and stuff," or if you prefer to go uptown, "nouns name classes of entities and substances." We'll return to this issue below when we distinguish more fully between count and non-count nouns.

Unfortunately, characterizing nouns as names of things and stuff only works if we limit our interpretation of "things and stuff" to just what nouns name, which makes it utterly circular. Moreover, if we answer "yes" when asked whether events, actions, states, characteristics, and relationships are things, then we must allow that verbs, adjectives and other parts of speech also name things. But surely that's a bit of a problem, because verbs have traditionally been assumed to name actions and states of being, adjectives to name characteristics, and prepositions to name relationships. Our focus on the typical meanings of nouns is what has gotten us into this fix. So we must look at other characteristics of nouns if we are to have any success in finding ways to identify them.

We've worked through the definition of *noun* as thoroughly as we did because we take definitions seriously. We think they should be accurate (remember our discussion of critical thinking in our Introduction to this

book): imagine looking up the word *dugong* in a dictionary and finding it defined merely as "a kind of animal." Such a definition won't help us use the word accurately. Likewise, if we are to use the word *noun* accurately, then we need to define it accurately. We need accurate definitions of parts of speech to allow us to accurately determine which categories words belong to. And this is important because a word's part of speech determines whether and how it can be inflected as well as its roles in phrases and sentences. We want our definitions to provide us with criteria by which we can accurately determine the part of speech of any word we choose to examine. For better analyses we must consider the forms of words.

Formal characteristics of nouns

We approach the classification of nouns, and of the other major parts of speech, through a series of simple formal tests. However, because no single test will always lead to reliable results, part-of-speech identification requires multiple criteria and tests of different types. We cannot rely on a single test because our tests are like any scientific tests—sometimes they give false positive results (e.g., they tell us that we are ill when we aren't) and sometimes false negatives (e.g., they tell us that we are well when we are ill). This is primarily due to the fact that each part of speech includes many sub-categories, each of which has slightly different properties from the other sub-categories and which therefore respond somewhat differently to our tests. As a result, we have to interpret our test results cautiously. We say that a word belongs to a particular part of speech to the extent that it passes the various tests for that part of speech.

ANALYTIC TEST 1. *A word may be a noun if it ends or can end in the plural inflection*.

Table 1 shows the spoken and written versions of the regular noun inflection:

Plural: morphophonemically /s/, /z/, and /ɪz/ or /əz/	spelled -s or -es (e.g., printer**s**)

TABLE 1: THE REGULAR NOUN INFLECTIONS

The majority of English nouns accept the {-s} plural. The exceptions are the small subclass of nouns that refer to animals (*deer*, *fish*, etc.), nouns that denote stuffs (*grease*, *oatmeal*, *ice*), and nouns that mark the plural in idiosyncratic ways (*child*/*child**ren***, *man*/*m**e**n*, *woman*/*wom**e**n*, *cherub*/*cherub**im***, *alumnus*/*a*, *alumni*/***ae***). (A general principle of language is that irregularity

tends to occur in the most frequently used or most over-learned items. As a result, teachers can assume that native English speaking students know many of the most frequently used irregular forms, although the irregularities may vary from dialect to dialect.)

Exercise

1. Provide the inflected plural forms of the following nouns (i.e., apply Analytic Test 1): *insect, email, hinge, solo, calf, disease, coil, promise, daisy.* Pay attention to the words' spelling and consult a dictionary if you are uncertain.

2. The following words have undergone zero derivation/conversion: *rip-off, snap, wipeout, update*. To each, apply Analytic Test 1 to show that it is (or can be) a noun.

ANALYTIC TEST 2. *A word may be a noun if it* ***actually*** *ends in a nominal derivational suffix.*

In English, the last derivational suffix on a word gives a strong clue to the word's grammatical class. If the last suffix is one of those listed in Table 2, then that is a good indication that the word is a noun.

SUFFIX	EXAMPLE
-age	acreage, mileage
-ance/-ence	tolerance, adherence
-ard	drunkard
-cy	decency
-dom	freedom
-er/or	teacher, actor
-ess	actress
-hood	knighthood
-ism	existentialism
-ist	existentialist
-ity	activity
-ment	amusement
-ness	truthfulness
-th	truth
-(a)tion	adulation, fruition

-ude	gratitude

TABLE 2: COMMON NOUN-FORMING DERIVATIONAL SUFFIXES

Exercise

Why do you think English has so many different noun-forming derivational suffixes? (Hint: look up several of them in a large dictionary.)

A common role of derivational morphemes in a language is to change words of one part of speech into related words of another part of speech. Thus the verb *tolerate* becomes the noun *toleration*; likewise, the verb *act* becomes the adjective *active*, which becomes the noun *activity*, by the addition of their respective suffixes. Sometimes derivation will change a word to a different subclass of the same part of speech, with a different, though related meaning. For example, the suffix {-hood} turns the noun *knight* into the noun *knighthood*, just as {-dom} turns the noun *king* into the noun *kingdom*. As we mentioned, only the **final** derivational suffix on a word determines its part of speech: *disestablishmentarianism* contains four suffixes; the last, {-ism}, makes it a noun. (Plural and genitive inflections may follow the derivational suffix without affecting Test 2.)

Derivational suffixes are less useful than inflections as clues to nouns because of their limited **productivity**, that is, how freely they may be added to words: {-er}, {-ness} and {-ity} are relatively productive noun-forming suffixes; we could, for example, add {-er} to a newly minted verb, e.g., *to iPod* to create the noun *iPodder*. On the other hand, the {-th} suffix in *depth* can no longer be used to derive nouns from adjectives; **lowth* from *low* + *th*, cf. *height* from *high* + *th* (the spelling is misleading here). (See Bauer 1983, 1988; Huddleston and Pullum 2002; Quirk, Greenbaum Leech and Svartvik 1972 for discussions of productivity.)

Moreover, as you know, English allows **zero derivation** (**conversion**, **category change**, and **functional shift**), by which a word's grammatical category may be changed without any change of form, such as the addition of a derivational suffix. Thus the verb *trade* has been converted to the noun *trade*, as illustrated by the ability of the latter to accept the plural inflection (*trades*). As a result of zero derivation, there will be many derived nouns that have no derivational endings. Such forms may appear to students to possess the semantic characteristics associated with their original class. For instance, the noun *kick* will (accurately) seem to name an action rather than a person, place, or thing.

This fact further illustrates the danger of semantic definitions.

Exercise

1. Using the derivational affixes in Table 2, apply Test 2 to determine whether the following words are nouns: *certitude, probity, wealth, goodness, defilement, recency, boredom, editor, fragrance, characterization, transcendentalist, motherhood.*

2. Check a dictionary for the meanings and other properties of the noun-creating suffixes in Table 2.

ANALYTIC TEST 3. *A word may be a noun if it can occur alone after a word that typically precedes nouns and together they constitute a complete phrase.*

Nouns can be identified by the company they can keep. Words that can occur immediately before nouns and together with a noun create a potentially complete noun phrase are:

a. articles:	a, an (indefinite) (e.g., a bulldog) the (definite) (e.g., the building)
b. genitives:	my, our, your, his, her, its, our, genitive noun phrases (e.g., my novel, our class, Sheila's desk, the man's car)
c. demonstratives:	this, that, these, those (e.g., that cup)
d. quantifiers:	some, any, all, no, every, numerals (e.g., every time, two pots) ordinals (first, second, etc.) (e.g., first place)
e. most adjectives:	good, subtle, etc. (e.g., good work)

Some of these forms—particularly demonstratives, quantifiers, and adjectives—can occur alone as phrases. It is their potential to combine with a noun to constitute a noun phrase that is relevant here.

The possibilities listed above form the basis for **frames**. Frames consist of context items, such as articles or demonstratives in the case of nouns, and a test position where we put the word whose part of speech we want to identify. For example, from the fact that an article and a following noun can constitute a complete noun phrase, we can create the frame [the____] to test for nouns. Here *the* is the context item and _____ is where we put

the item to be tested. These tests operate simply. Just put the word to be tested (e.g., *defense*, *kitchen*) into the test position, and if the combination of context item and test item forms a grammatical noun phrase, the test word is very probably a noun. For example, the fact that [the cattle], [the fish], [the furniture] are all grammatical expressions shows that *cattle*, *fish*, and *furniture* may all be nouns.

Exercise

Apply the frame [the_____] to show that *apple, grievance, bellows, invitation,* and *implement* can all be nouns.

Words that cannot grammatically fill this test position are probably not nouns, for example, *[the defend], *[the the], *[the this], *[the never], *[the correctly]. (Remember, a * before an expression indicates that the expression is ungrammatical.)

Exercise

Using the frame [the_____], show that *increased, there, also, as,* and *generate* are not nouns.

From the remaining context items in Analytic Test 3, we can create other frames for nouns, for example, [a(n)_____], [your_____], [my friend's_____].

Exercise

1. Using the frames just above, determine whether *defense, kitchen, activity, active, certainty, certain, beating, demanding, limousine, depend,* and *luxurious* can be nouns.

2. Create five more frames to test for nounhood using the context items in Analytic Test 3. Then use your frames to determine whether any of the following words can be nouns: *force, graciousness, amplitude, vaporize, colossal, quietly.* Check your analysis by applying Analytic Tests 1 and 2 to these words.

Functional characteristics of nouns

Nouns have two main functions. The first, and perhaps less important one, is that of **modifier** of other nouns, e.g., ***metal*** *door*, ***linguistics*** *class*. The more dominant function is that of being the **head of a noun phrase**. Many functions traditionally associated with nouns (e.g., subject, direct and indirect object of clauses, object of a preposition, subject and object complement) are really the functions of noun phrases. Hence we will postpone discussion of these functions to our chapter on Basic Clause Patterns.

Subclasses of nouns

There are lots of different kinds of nouns, and in spite of our reservations about using meaning as a criterion to determine parts and subparts of speech, we will use aspects of meaning to distinguish the traditional subclasses of nouns, but we will back up the semantic distinctions by pointing out formal patterns that correlate with them. In fact, we can only be certain that meaning distinctions really exist in the language if they correspond to distinct formal patterns.

Proper nouns, as we have seen, are the words that best fit the traditional definition of a noun—i.e., a word that names a person, place, or thing. Thus your personal name names you (though it may also name other people); *Denver* names the capital city of Colorado, and *Colorado* names the state that Denver is the capital of—both of which are places and things. Note that proper nouns are spelled with an initial capital letter, and if the proper name consists of more than one word, e.g., *the Statue of Liberty*, then all the major words are spelled with initial capitals. We will deal with complex proper names like this in our chapter on Phrases. Some texts may vary in their treatment of nouns. For example, McBeth (2001) sometimes capitalizes *Gay* and sometimes does not, and Gee (1996) distinguishes *discourse* from *Discourse*.

Common nouns name classes of things. Individual physical objects are the most straightforward instances of things, and the words that name classes of such things are indeed generally nouns, e.g., *book* names the class of books and *hard drive* names the class of hard drives. Nouns that name classes of physical things are called **concrete nouns**. Other examples include *sneeze*, *floor*, and *paper*.

Not all things are physical; some, like ideas, exist only in our minds. Words for classes of things that exist only in minds, e.g., *goodness*, *truth*, *beauty*, and *reason*, are called **abstract nouns**. Abstract nouns tend to be non-count (see below) and to end in certain derivational suffixes, e.g., {-ness}, {-ity}, {-th}, {-ude}.

Common nouns may also name classes of collections of things; for exam-

ple, *platoon* names the class of a particular type of collection of soldiers; *team* names the class of collections of people gathered together for some common purpose. Nouns that name classes of collections are called **collective nouns**. Other examples include *army* and *congress*. In American English, collective nouns normally take a singular verb (e.g., *The jury **is** out*), while in British English they take a plural (e.g., *The jury **are** out*). The American variety sometimes uses the plural to suggest lack of unity within the group (e.g., *The jury **are** divided*). Pronoun substitutes for collectives are also normally singular in American and plural in British English.

An important subdivision of nouns, particularly for people learning English as a second language, is between **count** and **non-count** (also called **mass**) nouns. Some non-count nouns are thought of as representing things as if they were undifferentiated masses whose parts are not identified as discrete units (*rice*, *sugar*, *milk*, *news*). Count nouns represent entities that can be individuated and counted (*typewriter*, *diskette*, *page*). It follows that a piece of news is still news, but a piece of a diskette is not a diskette.

Formally, count nouns may be singular and plural (*cup*, *cups*); non-count nouns are typically singular (*information*, **informations*). Count nouns may be preceded by the indefinite article (*a day*); non-count nouns may not (**a furniture*). Count nouns may be preceded by *many* (*many bikes*), while non-count nouns may not (**many dust*). Count nouns may be preceded by *not many* (*not many kittens*); non-count nouns may not be (**not many wealth*). Non-count nouns may be preceded by *not much* (*not much rice/wealth*); count nouns may not be (**not much books*).

If the head of the subject of a sentence is a non-count noun, then the verb will be in the singular (*The milk **is** in the fridge*), but if the head is a count noun, the number of the verb will depend on the number of the noun (cf. *The bottle **is** in the fridge*; *The bottles **are** in the fridge*).

Zero derivation can recategorize count and non-count nouns. Non-count nouns may become count nouns, and as a result may be pluralized. However, they undergo a semantic shift—for example, to either *type of something* (e.g., *the cheeses made in Wisconsin*) or *unit of something* (e.g., *three coffees*). Analogously, count nouns may be recategorized as non-count nouns, but they also undergo a semantic shift, for example, from individuals of the count noun category (*He caught a fish*), to stuff derived from the individuals (*He likes to eat fish*).

Exercise

1. Using the grammatical characteristics just discussed, say whether

each noun in the following list is count, non-count, common, proper, concrete, abstract, or collective. Some may belong to more than one of these subclasses. For each one that does, say which subclasses it belongs to: *aluminum, class, college, couple, criterion, excellence, information, member, Michigan, nomination, patience, platoon, tranquility, troop, Yosemite*.

2. Some non-count nouns denote substances made up of small discrete particles, and we can speak of individual particles or numbers of them by modifying the noun with an expression of the form *X of Noun,* e.g., *grain of wheat, kernel of corn*. Identify ten more such nouns and the expressions that denote their particles.

3. Other non-count nouns denote what Huddleston and Pullum (2002: 336) refer to as "aggregates," that is, instead of denoting masses composed of very similar particles, they denote aggregates of miscellaneous things that typically share some function. These words also have special individualizing words, e.g., *piece of furniture, item of apparel*. Identify ten more such nouns and the expressions that denote their individuals.

4. We also have special expressions for the portions we typically divide some stuffs into, e.g., *slice of cake, loaf of bread, wedge of pie*. Identify ten more such nouns and the expressions that denote their typical portions.

5. Using a selection of count and non-count nouns, determine which subclass the following expressions may directly modify: *enough, little, each, neither, all*. For example, *sufficient* can modify non-count but not (singular) count nouns—*sufficient money* but **sufficient dollar*.

6. The count/non-count distinction poses difficulties for non-native speakers of English, at least in part because languages do not all make the distinction in the same way. As a result, nouns that are translation equivalents may belong to different subcategories. Thus *information* is non-count in English, but its translation equivalents in French and Italian are count. Check a piece of text written by a learner of English to see whether the writer has full control over the count/non-count distinction.

Some remarks on the genitive case

The genitive case is typically indicated by the suffix {-'s}, e.g., *Maria**'s** success*. The genitive expression modifies a following noun: *Maria's* modifies *success*. Its spelling is generally written as *-'s* (*the book**'s** cover*) if the expression it is attached to is singular or is an irregular plural (*the children**'s** toys*), and either just an apostrophe if the expression it's attached to ends in *s* (*the Jones' house*), though editorial practice varies on this and some editors use *-'s* (*the Jone**s's** house*).

While the genitive is generally spelled as *-'s* or *-s'*, there are some specific exceptions. Several of the personal pronouns, as we'll see in our chapter on Minor Parts of Speech, have genitive forms ending in *-s*: *ours*, *yours*, *theirs*. Note that there is no apostrophe in the spelling of these forms. This is particularly noteworthy in *its*, the genitive of *it*, which is frequently misspelled as *it's*. This error is due to two factors: first, *its* violates the general pattern of spelling the genitive with an apostrophe (though it is consistent with the sub-pattern that pronouns do not include the apostrophe); second, *its* may be confused with the word *it's*, which is a contraction of *it is*. Note that *whose*, without the apostrophe, is the genitive of the pronoun *who*, while *who's*, the contraction of *who is*, is parallel to *it's*.

Like the regular plural {-s}, the genitive has three allomorphs: [s] after voiceless segments (*Dick's*), [z] after voiced segments (*Toni's*, *Tom's*), and [əz] or [ɪz] after sibilants (*Francis's*).

The genitive is often referred to as the possessive case. However, the genitive denotes far more than just possession. For example, *Bill's* in *Bill's TV show* is in the genitive, but besides possessing the TV show, Bill might also have been its producer, director, star, gaffer, key-grip, fan, or occasional viewer. To avoid too narrowly characterizing the meaning of the genitive, we prefer this term to possessive.

Exercise

Briefly discuss the possible meaning relations between the genitive expression and the noun it modifies in:

a. the candidate's advisors
b. the book's author
c. Andy's pottery
d. the bird's egg
e. the company's CEO
f. the country's attackers

The genitive case has generally been regarded as an inflection suffixed to nouns and pronouns. And while it is true that pronouns may take the genitive inflection, it is more accurate to say that noun phrases, not nouns, may take it. Note where the genitive inflection is attached in *Oscar**'s** plays*, *Humpty Dumpty**'s** fall*, *the kid**'s** skateboard*, *the kid next door**'s** dog*, *the guy you broke up with**'s** car*. Unlike the plural inflection, which is suffixed to the head noun of an NP, the genitive inflection is suffixed to the end of the NP.

Although *s*-genitives occur on nearly all noun phrases, sometimes the alternative *of*-phrase sounds stylistically more natural; cf. *the cause of the accident* vs. *the accident's cause*. In English, the inflected genitive is most comfortable with animate entities.

Verbs

Verbs can be subdivided into **main** and **auxiliary verbs**. We will treat the various types of auxiliaries, such as *may*, *might*, and *should*, in our chapter on Minor Parts of Speech and will concentrate here on **main verbs**, i.e., those which may occur alone in a clause. Traditional grammars define verbs semantically, e.g., as words that represent **activities** (*grow*, *kiss*, *freeze*, *run*) and **states** of being (*be*, *have*, *resemble*). States are unchanging situations while activities are situations in which change occurs. (Activity verbs are also called **dynamic** verbs, though the terminology is far from consistent.) State verbs typically have to do with existence and static relationships. Just as nouns denote classes of entities and stuff, verbs denote classes of states and activities.

As with most meaning-based definitions, this one is a tad simplistic. For instance, nouns derived from verbs through zero derivation (e.g., *strike*, *kick*, *throw*) maintain their sense of action, as nouns derived from verbs by derivational affixing do (e.g., *action*). Likewise, verbs derived from nouns—e.g., *pot*, as in *to pot plants*—may appear to retain some of the entity-naming sense they had as nouns. In addition, students occasionally classify certain adjectives as verbs, especially those adjectives that suggest activity (e.g., *vigorous*, *playful*, *cruel*), and we've had a student who classified the preposition *as* as a verb because it denoted a relationship, as verbs often do. Additionally, adjectives and other types of expressions may name states, cf. *to sleep* and *asleep*. Nonetheless the semantic division of verbs is a good place to start our discussion, though we'll refine the activity/state division in the exercises in this section.

As we noted in our discussion of nouns, it is important to correlate a semantic distinction with distinct formal patterns. The distinction between activity and state verbs correlates with whether or not a verb can occur in the progressive aspect: activity verbs can (*Oscar **is growing** tall*); state verbs cannot (**Oscar **is resembling** his father*).

Exercise

1. Using the progressive aspect test, determine for each of the following verbs whether it is an activity or a state verb: *read, examine, email, own, buy, know, dry, love, be, become*. Did you run into any problems? How did you solve them?

2. State verbs are particularly common in academic writing. Confirm this by examining a selection of texts from that genre. Why do you think state verbs are so common in this genre?

We saw that nouns may shift between subcategories, so it should be no surprise to find verbs shifting between the state and activity subcategories. For example, *be* is a state verb in *Oscar is weird* but an action verb in *Oscar is* ***being*** *weird*, as its occurrence in the progressive shows. The former sentence means that Oscar is generally or characteristically weird; the latter means that he is acting weird, though we can expect him to snap out of it eventually.

Exercise

1. The distinction between permanent and temporary characteristics is an important one. Compare *Tigers are fierce* with *Tigers are tired*. The former sentence is grammatical and unremarkable. It represents a general characteristic of the class of tigers. The latter sentence is odd in that it seems to attribute a characteristic we would normally assume to be temporary as if it were a permanent characteristic of tigers in general. The permanent/temporary distinction is exploited in dictionaries. Look up *tiger* and four other words in a dictionary and discuss how this distinction is reflected in how they are defined.

2. For students who know Spanish. Spanish has two verbs that correspond to English *be, ser* and *estar*. What is the rule usually given for when to use each of these verbs? Check your answer in a Spanish dictionary, grammar, or textbook.

Like all words, individual verbs may have more than one meaning. Consequently, we might expect one meaning of a verb to represent an activity and another meaning of the verb to represent a state. *Smell* is such a verb. The sentence *John is smelling the roses* is grammatical in the progressive

and therefore has an activity interpretation. Now compare *The roses smell musty*, which is non-progressive and grammatical, with **The roses are smelling musty*, which is progressive but ungrammatical. From data like this we must conclude that *smell* also allows a state interpretation.

There are many more subclasses of verbs and we present some of them in the following exercises to allow you to develop your understanding of verbs to the degree you need or want.

Exercise

1. Just on the basis of your intuitions, classify the following verbs as state verbs or activity verbs: *cost, depart, approve, approve of, remember, remain*. What difficulties did you experience in classifying these verbs semantically? Check your classification by using the progressive test.

2. Look up the word *appear* in a good desk dictionary. How many different meanings does it have? Identify which of these meanings indicate states, changes of state, or actions.

3. *Clean* and *tidy* are activity verbs. What change of state does each describe? Paraphrase the verbs using the adjectives *clean* and *tidy*. Think of several more such verbs and their associated adjectives.

4. Which kind of verb (state or activity) can be used to answer the question, *What did X do?* Supply example sentences, both grammatical and ungrammatical (e.g., *She learned American Sign Language* vs. **She knew American Sign Language*) to support your answer.

5. A distinction related to change of state is between **telic** and **atelic** verbs. Telic verbs represent events that have a natural end point, the accomplishment of some purpose, or a change of state, e.g., *make, evaporate*. (These are also called **accomplishment** or **resultative** verbs.) Once something is made or has evaporated, the making and evaporating processes must stop for that thing. As with change of state verbs, telic verbs in the progressive represent processes before their completion. *The water is evaporating* implies that the water has not yet fully evaporated. Atelic verbs represent events as having no natural end-state or product, e.g., *golf*, as in *The CEOs are golfing*. A verb may be telic on some occasions, e.g., *The children are playing a game of*

chess, but atelic on other occasions, e.g., *The children are playing*. For each of the following sentences decide whether it represents a telic or an atelic situation and justify your decision.

a. She wrote a poem.
b. She writes poetry.
c. The water froze.
d. The water is freezing.
e. The plane arrived.

6. The count/non-count distinction in nouns is similar to the telic/atelic distinction in verbs. Count nouns represent classes of bounded entities; telic verbs represent classes of bounded situations. Non-count nouns represent unbounded classes of things or substances; atelic verbs represent unbounded classes of events. Thus, a piece of a chair is not a chair, but a piece of paper is still paper. Similarly, writing a piece of a poem is not the same as writing a poem, though a piece of writing is still writing. What conclusions might you derive about human cognition from this similarity between nouns and verbs?

7. Identify all the main verbs in Exercise 6 just above. Then classify each main verb as state or activity. Which kind of verb predominates in that piece of text? Can you divide the text into two sections, each with a different rhetorical purpose? Do the verbs in the two sections differ? Why do you think that might be?

8. We can divide the category of activity verbs into those that represent events that take just a point of time (**punctual** verbs), e.g., *tap,* and those that take a period of time (**durative** verbs), e.g., *read.* In the progressive, punctual verbs strongly suggest repeated action. *Oscar is tapping his fingers impatiently* describes multiple finger taps. But *Oscar is reading* strongly suggests a single, continuous episode of reading. Put each of the following verbs into the progressive, then determine whether the resulting expression denotes multiple, repeated events, or a single, continuous activity: *punch, beat, nap, flap, wink, close, run, work.*

9. **Change of state** (**process**) verbs are yet another subclass of activity verb. As their name suggests, they describe change from one state to another, e.g., *melt*. If something melts then it changes from a solid to a liquid state. But notice how such verbs are interpreted when they

are in the simple past tense (*The ice melted* describes the completed change) and in the progressive aspect (*The ice is/was melting* describes the melting in progress but not yet complete). By comparing their interpretations in the past tense and the progressive, show that the following verbs are also change of state verbs: *freeze, evaporate, arrive, ignite, die.*

10. A change of state verb simply represents some entity as undergoing or having undergone a change from one state to another. However, sentences may also include information on what caused the change of state; compare *The cook thickened the sauce* with *The sauce thickened.* The former sentence tells us who caused the sauce to thicken; the latter does not. Let's call clauses that include information on the cause of a change of state **action** clauses, and their verbs **action** verbs. (Remember, activity and action verbs are different.) Generally, simple change of state clauses are intransitive with the entity undergoing the change of state represented as the subject, while action clauses are transitive with the subject representing the cause of the change of state and the object representing the entity changed. Here are some instructions from recipes whose verbs are action verbs:

a. Preheat oven to moderate.
b. In a saucepan melt the butter.
c. Boil the milk.
d. Thicken the sauce.
e. Brown the meat.
f. Dissolve the sugar in the boiling water.

Why do you think that the instructions in recipes use so many action verbs?

11. Here are some sets of verbs from the instructions in other recipes: (a) *peel (potatoes), core (apples), bone (meat);* (b) *cube (meat);* (c) *cut (meat), chop (vegetables);* (d) *place (ingredient in pot), layer (ingredients in pot);* (e) *add (ingredient to pot);* (f) *fry, sauté, broil;* (g) *boil, simmer.* What information, other than simply "do something to something," do the verbs in each group convey?

12. Think of ten verbs that include the meaning "movement to/from somewhere," for example, *go, come, run,* and *bicycle.* What information other than just movement to/from somewhere do these verbs include? If you know Spanish, translate *float* (e.g., *The log floated into*

the lake) and *roll* (e.g., *We rolled the barrel off the truck*) into that language and note how that other information is expressed. How would you describe the difference between English and Spanish in how they express that other information?

13. *Begin, start, keep, continue, stop, finish,* and *quit* denote parts, facets, or aspects of events (which is why they are called **aspect** verbs). Which aspect of events does each of the verbs in the list denote?

14. *Say, tell, announce, ask, answer, argue, deny, sing, yell,* and *whisper* all have to do with communication. What information, other than just "communicate," does each verb convey? Communication verbs like these are particularly common in conversation, news, and fiction. You can check this for yourself by taking samples of each genre. Why do you think communication verbs are common in these genres?

15. *Know, think, feel, want,* and *mean* represent mental states and activities. These are particularly common in conversation and fiction. Collect some samples of these two genres, identify the main verbs in your samples, and determine how many are mental verbs. Why do you think conversation and fiction are particularly rich in these verbs?

The semantic divisions of verbs represented in many of the exercises just above is only one of many. (See Biber et al. 1999, Cruse 2004, Frawley 1992, and Gregory 2000, Quirk et al. 1972, for various categorizations.) Clearly, because their meaning is so extraordinarily complex, the semantics of verbs may confuse students. It is simpler to use formal characteristics to identify verbs.

Formal characteristics of verbs

We must first distinguish formally between main verbs and auxiliary verbs. The main verb can appear by itself in a verb phrase; an auxiliary verb regularly appears only before a main verb. Consider sentence (1):

(1) The building collapsed onto the streets.

In this sentence, *collapse* is the main verb; it cannot be removed from the sentence without producing an ungrammatical result (e.g., **The building onto the streets*). The main verb will always be the farthest to the right in any

series of English verbs (e.g., *The building may have **collapsed***). In addition, auxiliaries can be inverted in questions (e.g., *Will the building collapse?*), while main verbs cannot (e.g., **Collapsed the building?*).

Just as we did with nouns, we use formal analytic tests to determine which words are verbs. English verbs potentially allow four inflections:

a. 3rd person singular present tense (spelled -s or -es and pronounced /s/, /z/, and /ɪz/ or /əz/).
   We symbolize verbs with this inflection as **Vs**.
   For example, *Harris bake**s** strudel regularly*.
b. Past tense (in regular verbs, spelled -d or -ed and pronounced /t/, /d/, and /ɪd/ or /əd/).
   We symbolize verbs with this inflection as **Ved**.
   For example, *Harris bake**d** strudel last night*.
c. Ing-form (spelled -ing and pronounced /ɪŋ/).
   We symbolize verbs with this inflection as **Ving**; it normally occurs with a form of the auxiliary verb *be*, or with a similar verb.
   For example, *Harris **is** bak**ing** strudel*.
d. En-form (in regular verbs, spelled and pronounced identically to the past tense).
   We symbolize verbs with this inflection as **Ven**; it normally occurs with the auxiliary verb *have* to create the **perfect** aspect, or with forms of *be* to create **passive** sentences.
   For example, *Harris **has** bak**ed**/eat**en** strudel*. (Perfect aspect sentence.)
   For example, *Harris **was** pursu**ed**/eat**en** by a lion*. (Passive sentence.)

TABLE 3: VERB INFLECTIONS

Using these inflectional possibilities, we can create a test for verbhood:

ANALYTIC TEST 4. *A word may be a verb if it can take some or all of the four types of verb inflections: **Vs**, **Ved**, **Ving**, **Ven**.*

Traditionally, Ving is called the **present participle**. When this form occurs with a form of the auxiliary *be*, it is part of the **progressive aspect**, which typically denotes an activity in progress, as in *Harris is baking*. As a marker of the progressive, {-ing} is usually regarded as an inflection. However, Ving also occurs in structures traditionally known as **gerunds**, e.g., ***Parting** is such sweet sorrow*. When {-ing} is part of a gerund, it is regarded as a derivational morpheme because its addition causes a change in part

of speech, namely from verb to noun. Ving forms may also be adjectives derived from verbs, for example, *a **crying** baby*, *a **peeping** tom*. Note that a "present" participle, that is, the Ving form itself, whether as the progressive or as an adjective, tells us nothing about when the activity occurred. Whether the situation represented by Ving took place in the past, is occurring at the time of speaking, or may occur in the future, is indicated by other parts of the clause, such as by tense marking on an auxiliary verb. Gerunds are similar: the events are not related to the time of speaking.

Traditionally, Ven has been called the **past participle** form of the verb. When the Ven form occurs with the auxiliary *have* to create the perfect aspect or with the auxiliary *be* to create the passive, it is usually regarded as an inflection because it does not cause a change in part of speech. However, there are adjectives in English that are formally identical to past participles, e.g., ***broken** heart*. In cases like this the affix is to be regarded as a derivational morpheme because it does cause a change of part of speech. For some verbs, the past participle form and the derived adjective form differ, e.g., *A **drunken** sailor*; *She has **drunk** all the martini*. Again, although the Ven form is traditionally called a "past" participle, like the "present" participle, the situations it represents are not related to the time of speaking.

Exercise

By adding the Vs, Ved, Ving, and Ven inflections show that each of the following words can be a verb: *provide, help, demonstrate, outline, promote*.

Tests based on inflections are so valuable that some traditional grammar books, especially those used to teach non-native speakers, provide extensive lists of the **principal parts** of verbs. Rather than using inflections to identify verbs, however, these grammars often suggest that students memorize these vast lists. A sample of such a list appears below as Table 4:

V Base Infinitive	**Vs** Present	**Ved** Past	**Ving** Ing-form Progressive	**Ven** En-form Past Participle
start	starts	started	starting	started
clean	cleans	cleaned	cleaning	cleaned
try	tries	tried	trying	tried
run	runs	ran	running	run
bring	brings	brought	bringing	brought
see	sees	saw	seeing	seen
throw	throws	threw	throwing	thrown
shrink	shrinks	shrank	shrinking	shrunk
hit	hits	hit	hitting	hit

TABLE 4: PRINCIPAL PARTS OF SELECTED VERBS

Table 4 also shows some important properties of verb inflections. First, certain inflections sometimes require changes in the spelling of the root (e.g., *tries*, *hitting*). Phonologically, these words follow the regular patterns noted above. Second, for regular verbs—e.g., *start*, *clean*, *try*—the past tense and Ven-forms are identical in sound and spelling. Irregular verbs—those which, for historical reasons, differ from the general pattern—display a variety of inflectional differences, but almost exclusively in the Ved and Ven-forms. With very few exceptions (e.g., *is*, *has*, *does*), Vs and Ving forms fit the general pattern. Moreover, some irregular verbs, such as *bring* and *hit*, follow the same pattern as regular ones by having identical Ved and Ven forms, though these are not formed by adding {-ed}. Besides varying among themselves in the formation of Ved and Ven forms, irregular verbs sometimes have dialect variants. For instance, *shrink* has the alternate past *shrunk*. Although *shrank* resembles the historically older form of the verb, *shrunk* reflects a pressure in modern English to make irregulars more regular, especially by making the Ved and Ven forms identical. Indeed, the archaic *shrunken* is used now only as an adjective, e.g., *shrunken head*. Only a few modern English verbs, such as *broken* and *frozen*, actually still use {-en} for the past participle form, though dialects vary—British English uses *mown* as past participle, whereas American English uses *mowed*. Finally, irregular verbs often have regional and social variants that may be stigmatized, particularly in academic settings. Students are often, unfortunately and inaccurately, considered slow or ignorant if they use *dove*, *drunk*, and *seen* as the past tense forms of *dive*, *drink*, and *see*. We discuss these issues in our chapters on Usage and Language Variation in Book II.

Enormous lists of principal parts of verbs may be useful for reference purposes or for non-native speakers, but they are not a generally useful pedagogical tool. For native speakers, rote memorization of such lists is a mind-numbing pursuit of trivia. Knowledge of the basic patterns discussed above, along with normal native-speaker intuition will allow any native English speaking student to produce the principal parts of all common English verbs. For instance, the Ved form can be determined by placing the verb in a simple sentence beginning with the word *yesterday* (e.g., *Yesterday I drank a gallon of grapefruit juice*). The Ven form can be obtained by placing the verb in a simple sentence following the auxiliary *have* or *has*, for example, *I have run two miles*.

Exercise

1. Identify which of the words below are verbs, using as many of the inflectional criteria above as possible. Do not be surprised if, with a little ingenuity, you can turn almost any word into a verb. Such potential innovations attest to the power of zero derivation and to the limitations of semantic definitions: *eraser, elbow, sense, fork, several, even, easy, always, up*

2. Because of historical changes in English, formerly inflectional morphemes have come to be derivational morphemes that are pronounced the same as their inflectional counterparts. This change affects two forms. First, {-ing} has come to occur on nouns formed from verbs, as in *the grumblings of the sailors*. Note that the {-ing} word may be pluralized and/or preceded by *the*. Second, both {-ing} and {-en} have become adjective endings in some words, as in *more interesting remarks* and *very frozen pipes*. If a word can be modified by *very, quite,* and *rather,* it is an adjective or an adverb, not a verb. Remember also the kinds of words that precede nouns. Consider the sentences below and argue that the italicized expression is or is not a verb.

   a. Frederick's constant *working out* in the gym
   b. The inner *workings* of a computer
   c. A *shrunken* head
   d. Juan's *penetrating* observations

ANALYTIC TEST 5. *A word may be a verb if it actually ends in a verbal derivational affix.*

Table 5 lists some typical verbal derivational affixes:

SUFFIXES	EXAMPLES
-ify	magnify
-ize/-ise	canonize, advertise
-en	lighten
-ate	participate, fluctuate

TABLE 5: TYPICAL DERIVATIONAL VERB SUFFIXES

Exercise

1. Using the list of affixes in Table 5, show that the following words are verbs: *traumatize, customize, sanitize, stupefy, electrify, brighten, darken, anticipate, punctuate*.

2. Check a dictionary for the meanings and grammatical characteristics of each of the suffixes in Table 5.

3. For each italicized word below, add, remove, or change one or more derivational affixes to make it into a verb. Double-check your answer by using inflectional criteria. ***Assassin*** (noun), ***tight*** (adjective), ***critical*** (adjective), ***alive*** (adjective), ***fat*** (noun, adjective), ***extermination*** (noun), ***harmony*** (noun).

ANALYTIC TEST 6. *A word may be a verb if it can be immediately preceded by words that typically precede verbs.*

Verbs have the potential to occur immediately after several classes of other words:

a. auxiliaries (*be*, *have,* and *do*)
b. modals (*will*, *would*, *can*, *could*, *may*, *might*, *shall*, *should*, and *must*)
c. *to* (infinitival) (e.g., *to have and to hold*)

We can create test frames based on these patterns, for example, [to____] (e.g., *to be*), [$_{VP}$do_____] (e.g., *did endure*).

Exercise

Using the frames [$_{VP}$will_____] and [$_{VP}$do_____], show that *recommend, find, know, assume,* and *inquire* can all be verbs.

It is important to use as many such frames and contexts as possible. The reason for this is that many of the context words can be ambiguous (e.g., *to* may also be a preposition) and they may appear before other parts of speech. As an example, let us ask whether *apply* can be a verb.

(2) a. I am applying.
b. I have applied.
c. I will/can/should apply.
d. I want to apply.

These examples show that *apply* can be a verb. Also, to apply test frames, we must allow the inflections of the word under scrutiny to vary to fit the specific test, for instance, the test word in [have____] must be in past participle form, e.g., *have sown*. Finally, we must make certain that the test sentences are appropriate. For instance, *to* can have a directional meaning, as in *We drove to Paris*. Confusing the preposition *to* with the infinitive *to* will lead to wrong results. The infinitival *to* in (2d) has no meaning; it serves only to mark a verb. (To make matters more complex, there is a third *to* that indicates purpose, as in *I drove to relieve tension*. When it is used in this way, *to* can be followed by a verb.)

Exercise

1. Create five more frames based on the context items in Analytic Test 6 and apply them to *attend, participate, give, conclude* to show that they can be verbs.

2. Using Analytic Test 6, determine which of the words *tall, stretch, underestimate, replace,* and *playful* can be verbs.

3. Using the verb frames in the text and those you created yourself, identify the verbs and non-verbs among the following words: *individual, learn, engage, various, actually, accomplish*.

Functional characteristics of verbs
Main verbs have one function, to be the head of a verb phrase (VP). As such, they may be preceded by auxiliaries, followed by objects and complements, and modified in various ways. As in the case of noun phrases, a VP may consist of a single word (e.g., *Harris* ***left***). We will deal with VPs in our chapter on Phrases.

Formal subclasses of verbs
Verbs may be (and in dictionaries for native speakers of English, usually are) subdivided into **transitive**, **intransitive**, and **linking**. Transitive verbs (e.g., *see*, *arrest*) require a direct object, which typically takes the form of a following noun phrase (e.g., *The police arrested* ***Steve Biko***). Intransitive verbs (e.g., *die*) do not take a direct object (e.g., *He died*). Some verbs may be transitive in some sentences and intransitive in others. For example, *run* is intransitive in *She runs regularly* but transitive in *She runs the company*. Linking verbs (*be*, *become*, *seem*) must be followed by a **subject complement**, which may appear as either a noun phrase (e.g., *He is* ***a nurse***) or an adjective phrase (e.g., *She is* ***aware of the situation***). Traditional grammars often refer to the former as a **predicate nominal** and to the latter as a **predicate adjective**. In either case, with a linking verb, the subject and the complement both refer or apply to the same individual (*he—a nurse*; *she—aware of the situation*).

Exercise

1. Check a dictionary to see which of the following is regarded as transitive, which intransitive, and which both: *lift, anticipate, arrive, endure*.

2. Check a dictionary to see if it distinguishes linking verbs from other types. Look up the verbs *be, become,* and *seem* and report on whether and how they are categorized as linking verbs by your dictionary.

3. Compare the part of speech and subcategory information given about *give* and *send* in a dictionary for native speakers and in one for English learners.

Adjectives

While traditional grammars usually define nouns and verbs semantically, they

often shift to functional criteria to characterize adjectives. A typical definition of adjective is "a word that modifies a noun or pronoun." (Occasionally you will see adjectives defined as "words that describe nouns," which makes no more sense than saying that "nouns are persons, places, and things." If adjectives describe anything, it is whatever the nouns they modify denote.) While we might criticize the traditional definition for changing from meaning to function, it is more appropriate to determine whether it leads to reasonably successful identification of adjectives.

The definition holds good in simple cases, such as ***old*** *shoes*, ***offensive*** *remark*, and *matters* ***inconsequential***, though in the last case, students may have trouble recognizing the second word, rather than the first, as an adjective. But in each case, the adjective does modify a noun, which serves as the head of the phrase. However, words that are clearly not adjectives may modify nouns; for instance, *stone* in *stone wall* is, by formal criteria, a noun and not an adjective (cf. *stones* and *stone's*). Likewise, *the* in *the wall* shows none of the formal characteristics of adjectives, though it clearly modifies the noun, *wall*. In a nutshell, the fact that a word modifies a noun is not a sufficient reason to call it an adjective.

The traditional, functional definition suffers also because it claims that adjectives may modify pronouns. Clearly an adjective cannot modify a pronoun in any of the examples below:

(3) a. *old them
    b. *offensive it
    c. *they inconsequential

To justify the inclusion of pronouns, grammarians refer to a different use of adjectives, as in sentences (4) and (5):

(4) The judge was late.
(5) She was ill.

In (4) and (5), the adjectives *late* and *ill* are **predicate adjectives** or **subject complements**. But the use of these separate labels suggests—correctly—that such uses of adjectives are really not instances of modification at all, but rather of complementation. Any student who tries to relate such examples to clear cases of modification will become befuddled.

Notice also the difference in the meaning of *late* in (4) and in *the late judge*. While most adjectives can occur as noun modifiers and as predicate adjectives, there are some that are specialized for only one of these two roles. For

example, *former* can only occur as a noun modifier (*The former senator* vs. **The senator is former*) and *alive*, *asleep*, *askew* can occur only predicatively (**The alive/asleep cat* vs. *The cat is alive/asleep*).

Exercise

Check the words *former, asleep, alive, askew* in your dictionary to see if their limitations are mentioned. Then check them in a dictionary designed for learners of English as a second language, such as the Cambridge International Dictionary of English, to see how they are treated there.

Clearly, adjectives may modify nouns. But because the ability to modify a noun is neither a necessary nor a sufficient basis for adjectivehood, we must augment the functional criteria with more reliable formal ones.

Formal characteristics of adjectives

The major formal characteristic of an adjective is its ability to be compared:

ANALYTIC TEST 7a. *A word may be an adjective if it can be made comparative and/or superlative by the addition of the inflectional suffixes* {-er} *and* {-est}. (Applies to short words.)

ANALYTIC TEST 7b. A *word may be an adjective if it can be made comparative and/or superlative by being modified by* ***more*** *and* ***most****.* (Applies to longer words.)

Exercise

Create four test frames for adjectives based on Analytic Tests 7a and 7b. Apply your frames to show that *traditional, perfect, unfavorable, similar,* and *subordinate* may be adjectives.

Comparison is a semantic change in adjectives that is regularly signaled by formal means. The uninflected forms are in the **positive degree**; the inflected forms are in the **comparative** and the **superlative**.

POSITIVE	COMPARATIVE	SUPERLATIVE
old	older	oldest
beautiful	more beautiful	most beautiful

A short adjective (one of 1-2 syllables) takes the {-er} and {-est} inflectional endings. Longer adjectives, including some 2-syllable words such as *alone*, may be modified by *more* and *most*, a class of words called **intensifiers** which includes *very* and *quite*.

Exercise

Using Analytic Tests 7a and 7b, identify which of the following words can be made comparative and/or superlative: *strong, honest, retaliate, harsh, uncommon, local, intensify.*

While these criteria are very powerful, they do not work for all adjectives, especially scientific adjectives such as *nuclear* and *barometric*. Fortunately, other types of tests are available:

ANALYTIC TEST 8. *A word may be an adjective if it actually ends in an adjectival derivational suffix.*

Table 6 lists some of the major adjectival suffixes in English.

-ish	boorish, skittish
-al	comical, alphabetical
-ar	nuclear, circular
-ful	cheerful, careful
-some	winsome, awesome
-y	funny, uncanny
-ic	choleric, atmospheric
-able/ible	debatable, sensible
-ing	interesting, amusing
-ed	disputed, concerned

TABLE 6: ADJECTIVAL DERIVATIONAL ENDINGS

Exercise

1. Extend the list of adjectival derivational endings. If you are in doubt about an ending consult a good desk dictionary or a reference grammar.

2. Which of the italicized words in the sentences below are adjectives? Justify your answers solely by Tests 7a, 7b, and 8.
   a. Your tie is *outlandish*.
   b. I have no *particular* doubts about your proposal.
   c. The chamber contains more *particular* matter than that one.
   d. Zubin is quite *unstable*.
   e. *Some* dogs are mean.

3. The last two derivational suffixes in Table 6 are superficially identical to verb forms in the present participle (Ving) and the regular forms of the past tense (Ved) and past participle (Ven). Think of example sentences that the adjectives appear in; think of sentences in which the verb forms appear. How can you differentiate the two? (We have noted that there is an ongoing historical process through which participles shift to adjectives. The process apparently occurs word by word. Can you identify any other verbs that are currently in the course of becoming adjectives?)

4. In a dictionary, look up the meanings and other grammatical characteristics of the adjective-creating suffixes in Table 6.

The tests we have provided eliminate from the list of adjectives many sorts of words that have been traditionally included with this class, to the confusion of many people. For instance, cardinal numerals such as *five* and ordinal numerals such as *fifth* cannot be called adjectives, since we do not say **fiver* or **fivest* or **fifther* or **fifthest*. Similarly we exclude (a) the articles *the* and *a/an*; (b) the demonstratives *this*, *that*, *these*, and *those*; (c) indefinites, including quantifiers such as *all*, *no*, *every*; (d) possessive pronouns such as *my*, *your*, *their*; and (e) interrogative pronouns such as *what* and *which*. All of these forms regularly modify nouns. None of them are adjectives.

To Tests 7 and 8, we can add one further formal feature of adjectives, their position in a sentence. Adjectives occur in a very limited set of positions. The two most common are (a) between a determiner (an article or article-like word) and a noun, and (b) after a linking verb (i.e., of the *be-become-seem*

type). We will discuss the words that function as determiners in our chapter on Minor Parts of Speech. Briefly, this class includes words such as *a/an*, *the*, *this*, *that*, *some*, *every*, and *many*. Thus the italicized words in sentences (6a-c) are adjectives:

(6) a. The *recent* discovery of HG 116 . . .
b. This *remarkable* discovery . . .
c. Some *unnerving* developments . . .

Examples of adjectives that appear after *be-become-seem* verbs are:

(7) a. I am *steadfast*.
b. She grew *stubborn*.
c. He appears *pig-headed*.

Using these patterns we can create another analytic test for adjectives:

ANALYTIC TEST 9: *A word may be an adjective if it can occur (a) between a determiner and a noun, or (b) after verbs of the* be-become-seem *class.*

These tendencies are not as strong as the earlier analytic tests that we proposed, since non-adjectives can appear in both positions; however, they may support the tests in doubtful cases.

Exercise

Create two test frames for adjectives based on Analytic Test 9, and apply them to *prominent*, *certain*, *seasonal*, *different*, and *next* to show that they may be adjectives.

As we mentioned earlier, adjectives and adverbs may occur after words such as *very*, *rather*, and *quite*:

(8) a. Very tired
b. Quite bored
c. Rather inflexible

ANALYTIC TEST 10: *A word may be an adjective if it can be modified by* very, quite, *or* rather.

Exercise

Create a test frame based on Analytic test 10 and apply it to *book, desperate, print, readable, squishy,* and *depend* to determine which may be adjectives.

We must make a rather important distinction here between gradable and non-gradable adjectives. Gradable adjectives are those that can be inflected for comparative and superlative and modified by *more*, *most*, *very*, *somewhat*, and similar words. Thus *smart* is a gradable adjective: *smarter*, *smartest*, *very smart*. Most of the adjectives we've discussed in this section are gradable. *Total*, on the other hand, is non-gradable: **She's a totaler/very total freak*. Other non-gradable adjectives include *absolute*, *atomic*, *electronic*, *entire*, *single*, as you can demonstrate for yourself by trying to inflect or modify them. Non-gradable adjectives may over time become gradable, and this process may cause usage controversy, as the recent history of *unique* shows. For more on this word, we suggest that you check *unique* in a dictionary, preferably one such as the American Heritage, which includes thoughtful usage notes.

Our final test for adjectivehood relies on the fact that only adjectives can occur in the frame [as ___ as a(n) X], where X is an appropriate noun. For example, in *as fearless as a lion*, *fearless* is in the test position and *lion* is a noun filling the X position. Because the expression is grammatical we can infer that *fearless* may be an adjective.

Exercise

Apply the test frame [as ___ as a(n) X], with appropriate nouns in place of X, to the following words to determine which are adjectives: *reasonable, round, table, give, quickly, homeward, reddish*.

Functions of adjectives

While adjectives often appear to directly modify nouns, in fact they primarily function as **heads of adjective phrases (AP)**, which we discuss in our chapter on Phrases.

Subclasses of adjectives

Traditional grammarians employ a set of distinctions that we will not adopt because some of the subcategories are based on a confusion of form and function. However, for purposes of completeness, we list these distinctions here,

but treat the forms elsewhere. **Descriptive adjectives** are those adjectives that satisfy Analytic Tests 7, 8, and 9. Like nouns, this group is sometimes subdivided into **common** (e.g., *honest*, *alive*) and **proper** (e.g., *Atlantic*, *Indian*). Proper descriptive adjectives are typically derived from proper nouns and many do not allow comparison, though they regularly end in derivational suffixes typical of adjectives.

Aside from descriptive adjectives, traditional grammars recognize as adjectives other forms which are not formally adjectives but may modify nouns. Throughout this section, we have tried to justify their exclusion from the adjective category. Table 7 identifies some of these subclasses, each of which confuses a word's part of speech with its function.

Noun as Adjective	**Easter** bonnet
Pronoun as Adjective	**This** situation
Adverb as Adjective	**Far** South
Possessive Adjective	**Someone's** lunchbox
Demonstrative Adjective	**Such** effrontery
Interrogative Adjective	**Whose** signature is this?
Relative Adjective	The person **whom** I will help
Numeral Adjectives	**Five** guesses
Article as Adjective	**The** truth
Phrase as Adjective	Members **in good standing**
Clause as Adjective	Anyone **who desires an education**

TABLE 7: TRADITIONAL SUBCLASSES OF ADJECTIVES

The attempt to classify such a disparate group of structures as adjectives destroys the possibility of any consistent system of parts of speech. In our approach, none of the above categories exist. Instead, we would call the members of Table 7 "noun as modifier," "pronoun as modifier," "article as modifier," "phrase as modifier," etc.

Adverbs

The traditional definition of adverb is "a word used to modify a verb, an adjective, or another adverb." This definition is clearly functional and actually represents the typical functions of adverbs (or at least, adverb phrases) fairly well, e.g., *Run **quickly**, **extremely** adroit, **remarkably** cleverly*.

Exercise

To what extent do the italicized adverbs below conform to the traditional definition?

a. Atwood writes *clearly.*
b. *Clearly,* Atwood wrote the letter.
c. This sample is *obviously* atypical.
d. *Obviously,* this sample is atypical.
e. Belinda smiled *hopefully.*
f. *Hopefully,* Belinda will bring some refreshments.

The definition above omits an important function of adverbs, namely, modifying a complete sentence, as in b, d, and f in the exercise just above, and in (9):

(9) *Frankly*, I don't like calamari.

Here the adverb *frankly* indicates that the speaker feels he or she is being candid in uttering the sentence.

And as we have now grown to expect from functional definitions, the traditional definition of adverb will predict false positives, i.e., predict that certain words or expressions are adverbs when they are not. For instance, compare *cautiously* with *with caution* in *The officer approached the motorist cautiously/with caution*. Both expressions function identically—both tell us the manner in which the officer approached the motorist, i.e., both modify the verb *approached*. However, while *cautiously* is definitely an adverb, *with caution* is just as definitely a prepositional phrase. We will formally distinguish true adverbs from other phrases that can fulfill some of the same functions as adverbs, but we will refer to all expressions that function like adverbs with the cover-term **adverbial**.

Our approach, as usual, will be to begin with a formal characterization of adverbs. We will then return for a brief review of the functional division of adverbs according to what they modify—sentences, verbs/verb phrases, adjectives, and adverbs. Finally, we will indicate some of the traditional semantic categories of adverbs.

Formal characteristics of adverbs

Many adverbs cannot be inflected, but those that can are indistinguishable in that respect from adjectives. Hence we can minimally adapt the formal criteria we used for adjectives in 7a and 7b to apply to adverbs:

ANALYTIC TEST 11a. *A word may be an adverb if it can be made comparative and/or superlative by the addition of the suffixes {-er} and {-est}.* (Applies to short words.)

ANALYTIC TEST 11b. *A word may be an adverb if it can be made comparative and/or superlative by being modified by* ***more*** *and* ***most****.* (Applies to longer words.)

ANALYTIC TEST 11c. *A word may be an adverb if it can be modified by intensifiers such as* very, quite, *or* rather.

Test 11a, in fact, rarely applies, since the language contains relatively few one-syllable adverbs. *Hard* and *fast* are examples. One such form, *well*, has irregular comparative and superlative forms, *better* and *best*. Colloquially, words such as *quick*, *soft*, *slow* are inflected for the comparative:

(10) She threw it *quicker*/*softer*/*slower* than anyone expected.

Such usages, though, are usually regarded as prescriptively incorrect, the forms *more quickly*, etc., being preferred. In general, Test 11b serves as the norm of prescriptively acceptable comparison of adverbs:

(11) a. She threw it *more quickly*/*softly*/*slowly*/*cautiously* than anyone expected.
b. That is *most often* the case.

Exercise

Apply Tests 11a, b, and c to the following words to show that they may all be adverbs: *far, long, often, soon*.

Derivational tests also apply to adverbs, though there are only a few adverbial suffixes:

ANALYTIC TEST 12. *A word may be an adverb if it actually ends in an adverbial derivational suffix.*

Some typical adverbial suffixes are listed in Table 8.

-ly	quickly, frequently, awkwardly, cautiously (when {-ly} is added to adjectives)
-wise	lengthwise, otherwise
-ward	homeward

TABLE 8: ADVERBIAL DERIVATIONAL ENDINGS

Exercise

Use the derivational endings listed in Table 8 to show that the following words may all be adverbs: *fondly, gradually, northward, onward, recently, colorwise, edgewise*.

Because there are so few adverb-creating suffixes, it might seem difficult to distinguish between adjectives and adverbs. In practice, however, it is usually fairly simple to tell them apart because of their positions in sentences.

ANALYTIC TEST 13a. *Adverbs do not occur in the positions typically occupied by adjectives.*

ANALYTIC TEST 13b. *Adverbs tend to be relatively movable in a sentence.*

Let us use the adjective *frequent* and its related adverb *frequently* as examples of these criteria. As we have seen, adjectives can occur between determiners and nouns or after *be-become-seem* verbs, as in (12a) and (12b):

(12) a. Harriet was a frequent visitor.
b. Harriet's visits were frequent.

Adverbs in these positions are ungrammatical:

(13) a. *Harriet was a frequently visitor.
b. *Harriet's visits were frequently.

The sentences below show the results of applying Test 13b to the adjective *frequent* and the adverb *frequently*:

(14) a. Harriet was a frequent visitor.

b.*Frequent, Harriet was a visitor
c.*Harriet was frequent a visitor.
d.*Harriet was a visitor frequent.
e. Frequently, Harriet was a visitor.
f. Harriet was frequently a visitor.
g. Harriet was a visitor frequently.

The portability of adverbs in sentences is not random; they tend to occur in three positions: (a) at the beginning of a sentence; (b) at the end of a sentence; and (c) in the sequence of auxiliary verbs, especially after the first. Due to restrictions on particular adverbs, not all will occur in all three positions:

(15) a. I will *never* leave you.
b.**Never* I will leave you.
c. *Never* will I leave you.
d.*I will leave you *never*.

Exercise

Using Tests 13a and 13b, determine which of the following words may be adverbs: *academically, budgetwise, ever, friendly, portly, recently, reluctantly, southward, friendly, still, ungodly, unholy, worldly.* Confirm your results by applying Tests 11 and 12.

Functions of adverbs

Adverbs serve as **heads of adverb phrases (AdvP)**. Like adjectives, however, they accept only a few preceding modifiers (mainly *more/most*, *very*, and *quite*) and a limited range of following prepositional phrases (bolded) (e.g., *more rapidly* ***than a speeding locomotive***). Again, since most adverbs are unmodified, many grammarians include among their functions those that properly apply to AdvPs. We will have more to say about adverb phrases in our chapter on Phrases.

As we noted, adverbs and adverb phrases modify sentences, verbs/verb phrases, adjectives and adverbs. We briefly discuss and illustrate these functions.

Sentence modifiers have two major functions. They can indicate a speaker's evaluation of the truth of the sentence, as in (16a), or the speaker's feelings about the situation represented by the sentence, as in (16b) and (16c).

(16) a. *Clearly/apparently/obviously*, Wonkers is a schizo.
b. *Frankly/honestly*, my dear, we don't want a dam.
c. *Luckily/fortunately*, I regained control of the car.

Sentence modifiers also connect one clause or part of a clause with another, as in (17a)-(17c).

(17) a. The paramedics arrived and *eventually* Oscar was stabilized.
b. Summer arrived; *however*, the weather remained poor.
c. He gambled away his inheritance, and *consequently* had to work for a living.

The class of expressions referred to as "transition devices" by composition teachers includes such connective adverbs.

The following examples illustrate adverbs (bolded) modifying verbs/verb phrases (18a,b), adjectives (19a,b), and adverbs (20a,b) (italicized):

(18) a. He *waved* **frantically**.
b. She **coolly** *aimed the pistol*.
(19) a. It's a **wonderfully** *wicked* play.
b. It was **hideously** *deformed*.
(20) a. They approached **extremely** *hesitantly*.
b. He reacted **remarkably** *angrily*.

Exercise

Prescriptive grammarians often object to the use of *hopefully* as a sentence modifier, as in *Hopefully, my paycheck will arrive soon*. Check the usage labels on this word in a current dictionary. Does your dictionary mention this use of *hopefully?* If so, is it mentioned disapprovingly? What (if any) reasons support the disapproval of this word? What does the word mean? Is it an adverb or some other part of speech? What kind of adverb is it? Does it differ grammatically or semantically from other adverbs in its class?

Semantic subcategories of adverbs

Adverbs are often classified semantically in terms of Time, Place, Manner, Frequency, and Degree. Table 9 illustrates these categories.

MEANING	EXAMPLES
Time	today, yesterday, now, then
Place	here, there
Direction	northward
Manner	well, slowly, convincingly, quietly
Frequency	often, regularly
Degree	completely, thoroughly, absolutely

TABLE 9: SEMANTIC CLASSES OF ADVERBS

These categories are worth remembering, since most of them also apply to prepositions, which will be considered in our chapter on Minor Parts of Speech. In addition, some of these adverbs (e.g., *then*, *there*) serve as substitutes for prepositional phrases.

Our analysis eliminates the traditional categorization of words such as *very* and *quite* as adverbs, though the examples below show that they can modify adjective and adverbs:

(21) a. *very* old
b. *quite* frequently
c. *only* occasionally

Traditionally, these words are often lumped together with **degree adverbs**. We have already classified these words as **intensifiers**.

Exercise

Apply Analytic Tests 12-13 to demonstrate that the italicized words in (21) are not adverbs.

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GLOSSARY

ABSTRACT NOUN: noun that denotes entities apprehended by the mind, e.g., *truth*, *belief*. See **CONCRETE NOUN**.

ADJECTIVE PHRASE: a phrase with an adjective as its head.

ADJUNCT: modifier within a verb phrase.

ADVERBL PHRASE: a phrase with an adverb as its head.

ATTRIBUTIVE ADJECTIVE: function of an adjective (phrase) that precedes (or occasionally follows) its head noun. See **PREDICATE ADJECTIVE**.

CATEGORY CHANGE: See **CONVERSION**.

COLLECTIVE NOUN: a noun that denotes a group of individuals (*army*, *jury*, *the public*, *The United States*).

COMMON NOUN: a noun that refers to classes rather than to specific individuals, e.g., *tissue*, *box*, *xylophone*. See **PROPER NOUN**.

COMPARATIVE: degree of an adjective or adverb, signaled by *-er* or *more*.

COMPLEMENT: expression that completes a construction. See **OBJECT COMPLE-**

MENT, SUBJECT COMPLEMENT.

CONCRETE NOUN: noun that denotes an entity that can be apprehended by any one of the five senses, e.g., *sneeze*, *floor*, *paper*. See **ABSTRACT NOUN.**

CONTENT WORD: words (nouns, verbs, adjectives, and adverbs) that express the major information of a sentence. See **FUNCTION WORD.**

CONVERSION: change of part of speech without change of form.

COUNT NOUN: a noun that represents entities that can be individuated and counted, and hence can be made plural, e.g., *typewriter*, *diskette*, *page*. See **NON-COUNT NOUN.**

DEGREE ADVERB: adverb indicating the extent to which an adjective or adverb applies. See **INTENSIFIER.**

DESCRIPTIVE ADJECTIVE: any adjective that meets the formal requirements for adjectives.

FUNCTION WORD (also called **STRUCTURE WORD**): words representing grammatical information. See **CONTENT WORD.**

FUNCTIONAL SHIFT: See **CONVERSION.**

GERUND: in traditional grammar, a verb phrase that functions as a subject or object.

HEAD: main word of a phrase.

INFINITIVE: (a) a form of a verb without any inflection—i.e., the form that one would look up in a dictionary, e.g., *eat*. Abbreviated as V. (b) the same form of a verb when preceded by *to*, e.g., *to eat*.

INTENSIFIER: words such as *very* and *quite* that modify adjectives and adverbs.

INTRANSITIVE VERB: a verb that does not accept a **DIRECT OBJECT.**

LINKING VERB: a verb that is followed by a **SUBJECT COMPLEMENT.**

MAIN VERB: head of a verb phrase or predicate.

MODIFIER: optional expression that qualifies or restricts the denotation of another expression.

NOMINALIZATION: the process by which a word (or group of words) becomes a noun (or noun phrase), often through the addition of a derivational suffix.

NON-COUNT NOUN (also called mass): a noun thought of as representing things in the world as undifferentiated masses, whose parts are not identified as discrete individuals (*rice*, *sugar*, *milk*). See **COUNT NOUN.**

OBJECT COMPLEMENT: expression that complements a direct object. See **SUBJECT COMPLEMENT.**

PARTICIPLE: the Ving or Ven inflectional form of a verb; in traditional grammar, a verb form that modifies a noun.

PAST PARTICIPLE: the Ven inflectional form of a verb.

POSITIVE: degree of adjective or adverb that is not compared. See **COMPARATIVE** and **SUPERLATIVE.**

PREDICATE ADJECTIVE: adjective (phrase) that appears after the verbs *be*, *become*, *seem*, etc. See **SUBJECT COMPLEMENT.**
PRESENT PARTICIPLE: the Ving inflectional form of a verb.
PRINCIPAL PARTS: a list of the infinitive and inflectional forms of a verb: V, Vs, Ving, Ved, and Ven.
PRODUCTIVITY: the degree of freedom with which a linguistic process, e.g., nominalization, applies to items in its range.
PROGRESSIVE: aspect indicated by *be* + Ving.
PROPER NOUN: a noun that refers to individual entities rather than to classes of entities, e.g., *Thomas Jefferson*, *Denver*, *the Koran*. See **COMMON NOUN.**
SENTENCE MODIFIER: a function of adverbials to describe such things as the speaker's manner of presenting information in a sentence, or the speaker's judgment about the truth of the sentence.
STEM: form of word to which affixes may be attached.
STRUCTURE WORD: See **FUNCTION WORD.**
SUBJECT COMPLEMENT: function of an adjective phrase or noun phrase after verbs such as *be*, *become*, and *seem*.
SUPERLATIVE: degree of an adjective or adverb, signaled by *-est* or *most*.
TRANSITIVE VERB: a verb that requires a direct object.
ZERO DERIVATION: See **CONVERSION.**

Appendix to Major Parts of Speech

Prototypes

Perhaps the greatest frustration for students—and teachers—of grammar is the discovery that seemingly clear and airtight definitions and tests fail to work smoothly in all cases. We argued in our chapter on Major Parts of Speech that one source of this difficulty is the faulty status of definitions, for instance, those that determine parts of speech on the basis of their meanings or functions. Our system augments such definitions with a set of *formal conditions* pertaining to morphological (inflectional and derivational) and syntactic (positional) characteristics of words. As some of our exercises demonstrate, not all conditions will apply in all cases. For instance, the condition that nouns can be made plural might seem to exclude many words that are clearly nouns by other criteria, e.g., *cattle* and *furniture*. On the other hand, these words can accept the genitive, as in *the cattle's thirst* and *the furniture's delivery*. Additionally, the {-ure} morpheme on *furniture* is typical to nouns: *armature*, *ligature*, *caricature*, and *signature*, though other words besides nouns may appear to end in the {-ure} morpheme: *mature* (adjective or verb), and *insure* (verb). In other words, we seem to find cases where our

conditions (a) fail to apply to all members of a parts-of-speech class, and (b) seem to apply to words outside the class that the conditions are chosen to identify.

Two natural reactions to this situation are possible. One response would simply be to ignore the anomalies and present the conditions as absolutes. This approach requires that conditions be both **necessary** and **sufficient**. (Conditions are necessary if they **all** have to apply; they are sufficient if no other conditions are needed.) This approach has the serious disadvantage of colliding head-on with reality.

A second response would give up the entire enterprise of defining parts of speech as too haphazard to be worth doing. But if we adopt this course of action, we will never learn anything about language and our students will wrongly assume that it is utterly chaotic.

As you might suspect, we view both of these extreme positions as fundamentally wrong—wrong about the nature of language and wrong about the way in which language should be studied. Let us now examine why.

Let's begin with two exercises (or party games, if you prefer). First, ask a group of your friends to make a list of ten birds. If you tally your lists of birds, you will find that certain names appear early on many lists (e.g., *eagle*, *robin*, *sparrow*) while others appear later (e.g., *owl*, *crow*). Also, some names will appear on almost all lists while others (e.g., *chicken*, *penguin*, *ostrich*) will appear less frequently or not at all.

The next step is to ask your subjects **why** they made their choices. They will probably say that birds have feathers, lay eggs, and are able to fly. And in the clearest cases, all these conditions apply. However, in less clear cases, some but not all of the conditions apply or the conditions conflict. For example, robins have feathers, fly, and lay eggs, while chickens typically do not fly, or at least do not fly very far; penguins and ostriches do not fly at all.

While our experiment tells us about how we categorize actual birds, it also tells us about how we use the word *bird*. When we use an expression like *bird*, we group together objects not so much on the basis of a rigid set of characteristics, but on a set of criteria or conditions that we use flexibly. In this way we group together objects on the basis of what the philosopher Ludwig Wittgenstein called "family resemblances." You might envision, then, a target, with some objects close to the bull's eye—those entities that are clearly birds. Those entities that fall closest to the center of the target are called **prototypes**. They possess all of the features typical of the category. Toward the periphery of the target lie entities that are less "birdy," according to how many of the conditions they meet. In language, also, the boundaries between classes of words may be fuzzy. That is, just as we may occasionally

have trouble deciding whether to call a particular creature a bird (e.g., is archaeopteryx a bird?), we may also have difficulty deciding whether a word is a noun or an adjective (e.g., *poor*). See figure 5.1 in Aitchison (2003: 56).

Of course, not all conditions are of equal importance. Some are **essential**; their lack disqualifies something as being an instance of a category. For instance, a bird must lay eggs rather than produce live young. At the other extreme, some conditions are **excluded**; they must **not** be present. A bird cannot have four legs. Between these extremes lie other conditions. **Expected** conditions are associated with normal or typical characteristics, such as flight for birds. Creatures that lack an expected feature—e.g., penguins, which cannot fly—may serve to make the object an atypical or defective member of its class, without disqualifying it from membership altogether. Some conditions are merely **possible**; they result from common associations of the object. For example, birds commonly eat worms. Yet one would hardly be surprised at a bird that ate only seeds. Finally, certain conditions are **unlikely**, though not strictly impossible. A 1000-pound animal that met all the essential bird criteria might strain the imagination, but we would probably be willing to categorize it as a bird (Cruse, 1986).

We thus seem to identify objects on the basis of their resemblance to certain prototypes—an object which we consider the most typical member of the category. In other words, prototypes share all of the necessary and expected conditions, perhaps some of the possible ones, and none of the excluded or unlikely ones.

How does the notion of prototypes relate to grammar? Well, labels such as "noun" and "verb" have much the same status as "bird." We can state a set of conditions—inflectional, derivational, and syntactic—that allow us to classify words in a relatively consistent and logical fashion. However, cases arise when not all of the conditions apply. That is, certain nouns may be less "nouny" than others. Nevertheless, nouns demonstrate a family resemblance to one another because they share many characteristics. Of course, you can expect to encounter words that cause difficulties, since the borders of the noun category are fuzzy. For instance, consider the following words that end in *-ing*: *interesting*, *meeting*, *sing*, *singing*. Let us consider the condition of taking the plural morpheme, along with the related feature of appearing in the noun slot *two* ____. We can thus immediately eliminate *interesting* (**two interestings*) and perhaps *sing* (?*two sings*), unless we are Native Americans. We can immediately qualify *meeting* as a noun (*two meetings*). *Singing* raises some problems: is *two singings* grammatical? Speakers will vary in how they answer this question, indicating that the expression lies on the border of the noun category. Note, however, that the variation has no impact on the force of the conditions. Even

someone who accepts the phrase as grammatical will readily agree that it is not a typical use of the word *singing*. Thus we might conclude that the capacity to be made plural is an expected—though not essential—condition for nouns.

You might object that the notion of prototypes leads to linguistic anarchy. Perhaps there are no essential conditions. Moreover, if standards are flexible, aren't we in danger of measuring with a rubber ruler? This reaction, however initially reasonable, has no real justification. In fact, our position allows the maintenance of analytic standards without reducing grammar either to legalistic rigidity or anarchic mush.

For one thing, English itself is grammatically flexible. The prevalence of conversion from one part of speech to another with no formal change provides one clear example. English allows almost any word to be converted to another part of speech, at least in restricted contexts, as the following suggest:

(1) a. *Ifs*, *ands*, or *buts* (Subordinating and coordinating conjunctions to nouns)
b. *Whys* and *wherefores* (Interrogatives to nouns)
c. *But* me no *buts*. (Coordinator to verb and noun)

What we see here are instances of **linguistic creativity**, the ability to make infinite use of finite linguistic resources, which as we've seen, is characteristic of all languages. Clearly, the concepts we use to describe language should be able to account for the linguistic characteristics we actually observe. Categories arranged around prototypes and which allow fuzzy boundaries allow us to do this. Such categories do not require that we abandon our standards of linguistic usage; rather, they should encourage us to study and understand the language as it is used, not merely judge it on the basis of simplistic *a priori* assumptions.

Lest this sound too abstract, let's consider some practical consequences of the fact that not all criteria apply to every word in a class. One consequence is that we must accept that all major classes of words consist of subclasses of those words, e.g., those nouns that cannot be made plural (e.g., *information*, *independence*). Some of the nouns that cannot be made plural constitute the subclass of non-count (mass) nouns, though there are many other subclasses of nouns, of which we've seen a few. Teachers should be knowledgeable about the most important subclasses of words and their linguistic properties, e.g., count and non-count nouns, transitive and intransitive verbs, and so on, and be able to accurately present them to their students, especially to those students whose first language is not English.

A second consequence of prototypes is that they allow us to see similarities between classes of words. For instance, they encourage us to ask questions such as how is a noun like a verb? This question may seem like a riddle, but if we consider the two subclasses of verbs—transitive and intransitive—on the formal basis that the former but not the latter may take an object, as in (2a,b):

(2) a. The Broncos defeated the Jets.
b. The rabbit disappeared.

In (2a), *defeat* is inflected for past tense and so is clearly a verb, and because it is followed by the direct object (*the Jets*) it is transitive. In (2b), *disappeared* is likewise a verb, but it is intransitive since it cannot be followed by a direct object, as (3a,b) show:

(3) a. *The rabbit disappeared itself. (i.e, made itself disappear.)
b. *The magician disappeared the rabbit.

Corresponding to the verbs in (2), are nouns that resemble them:

(4) a. The Broncos' defeat of the Jets.
b. The rabbit's disappearance.

Note that example (4a) contains the noun *defeat* (it can be made plural), which has been converted from a verb and which is modified by the genitive phrase *The Broncos'*, which corresponds to the subject of the verb *defeat* in (2a), while the prepositional phrase *of the Jets* corresponds to the direct object *the Jets* in (2a). Likewise, the derived noun *disappearance* in (4b) corresponds to the verb *disappear* in (2b). However, just as the verb *disappear* cannot accept an object, the noun *disappearance* cannot take an *of*-phrase complement corresponding to a direct object, as shown by the ungrammaticality of (5a,b). (Compare to (3a,b).)

(5) a. *The rabbit's disappearance of itself.
b. *The magician's disappearance of the rabbit.

In other words, certain nouns have restrictions that closely parallel those of transitivity on verbs.

The facts of English grammar thus suggest that the rigid separation of parts of speech conceals a potentially rich network of similarities among

categories, similarities that might prove interesting for teachers of writing. A prototype approach encourages one to explore, rather than ignore, possible connections between categories.

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7 The Minor Parts of Speech

KEY CONCEPTS
Minor parts of speech
Pronouns
Articles
Auxiliary verbs
Negation
Prepositions
Intensifiers
Conjunctions

INTRODUCTION

In addition to the major parts of speech—nouns, verbs, adjectives, adverbs—there are many minor classes of words. Their number varies according to the level of detail in a particular analysis; more important is the clarity with which classes are distinguished. Our approach in the previous chapter used formal criteria to try to arrive at consistent assignments of words to parts of speech. Our approach in this chapter will be similar.

The minor word classes are often referred to as **closed classes**. This is because they have relatively few members, which are added to only occasionally. As a result, some of the minor form classes can be defined simply by listing their members. We will distinguish about a dozen of these classes, but the largest of them, the prepositions, has only about 50 members. Native English-speaking students do not need to memorize the members of these classes; they can become as consciously familiar as they need to be with them through presentation and practice. Some memorization may help some non-native English speaking students, but, again, proper presentation and lots of practice should enable them to develop control over these words.

Minor word classes have several properties in common. First, they tend not to alter the basic content of a sentence. For this reason, they have sometimes been called **function** or **grammatical words**, in contrast to the major parts of speech, called **content words**. Content words bear the main semantic burden in communication. They are the words that you would use to send a text message: *Broke. Send money*. Minor words, in contrast, signal modificational, relational, and interactional aspects of meaning; contextual information; or redundant grammatical information. Compare *I am broke; will you please send some money* with *Broke. Send money*. The words omitted from the second version are all minor class words.

Members of the minor word classes occur more frequently than mem-

bers of major classes. All of the 50 most common words in English are function words; they account for about 60% of words used in speech and 45% of those used in writing. (You can check this for yourself by counting the words in this paragraph, then counting the words belonging to the major parts of speech, and subtracting that number from the whole. The remainder is the number of words belonging to the minor parts of speech.) Though sometimes used to dramatize the sorry state of English, this statistic is as true of Henry James' prose as of the most pedestrian discourse. This is because the minor words are essential for indicating important modifications to, and relations among, the content words, regardless of whether the content words were chosen by the brilliant or the dull. Because they are important for integrating content words into the structural organization of sentences, minor class words are sometimes referred to as **structure words**.

In presenting the minor word classes, we will proceed mainly by listing some or all of their members. We will also note semantic, functional, and formal characteristics. Except for pronouns, the formal properties of these items do not (in English) include inflectional or derivational marking. Rather, they emerge from the item's ability to combine with other words, phrases, or sentences. For instance, *after* is a preposition because it can combine with a noun phrase (bolded), as in *after* ***the announcement***. The combination of a preposition and its following noun phrase is called a **prepositional phrase**. We will examine this and other phrases in our chapter on Phrases. Since minor class members may enter into several different types of combination, they will sometimes (like content words) be members of more than one class. For example, when *after* is followed by a clause, as in *After* ***the announcement appeared****, we received many phone calls*, it is traditionally thought of as a **subordinating adverbial conjunction**.

PRONOUNS

The traditional definition of "pronoun" is "a word used in place of one or more nouns." Let's test the adequacy of this definition by examining some examples:

(1) a. Jonathan felt sorry for Jeremy, so *he* repaired *his* bike for *him*.
b. Because *he* wanted to sell it, Jonathan repaired *his* bike.
c. Jonathan repaired *his* bike.

The traditional definition is a formal one; you can easily test it by replacing each one of the pronouns with either of the nouns *Jonathan* or *Jeremy* in (1a-c).

While the replacement definition of pronouns seems to work well enough

for (1a-c), ask yourself what *their* replaces in sentence (2):

(2) All of the members of the class elected Juan as *their* representative.

Clearly, if it replaces anything, it replaces a version of *All of the members of the class*, which is very definitely not a noun or mere list of nouns. In fact, *all of the members of the class* is a **noun phrase**, a group of words that has a noun (in this case, *members*) as its head word. Sentences like (2) (and there is an infinite number of them) show that the standard definition of a pronoun must be amended at least to read "a noun or noun phrase." But even this reformulation is not accurate. If we replace the noun *members* in sentence (2) with a pronoun, it becomes ungrammatical:

(3) *All of the them of the class elected Juan as their representative.

A pronoun replaces a noun only when that noun is the only word, and therefore the head, in its phrase. We must conclude that pronouns always replace entire noun phrases. For the moment, let's define a pronoun as "a word that replaces a noun phrase."

Any discussion of pronouns must address the issue of how we decide what a particular pronoun refers to in a specific sentence. For example, one very likely interpretation of (1c) is *Jonathan repaired Jonathan's bike*. On this interpretation, *his* is assumed to refer to whoever *Jonathan* refers to, presumably Jonathan. (Because a pronoun and its antecedent refer to the same entity in the discourse world, they are said to **co-refer**.) So the noun phrase, *Jonathan*, is used to determine the referent of *his*. A noun phrase that determines the referent of a pronoun is said to be that pronoun's **antecedent.** This term used to mean "going before," and in most cases, a pronoun's antecedent does precede the pronoun, though sentence (1b) shows that an antecedent can sometimes follow its pronoun.

However, sentences (1a-c) are systematically ambiguous. They can mean either (1d-f) or (1g-i), respectively:

(1) d. Jonathan felt sorry for Jeremy, so Jonathan repaired Jeremy's bike for Jeremy.
e. Because Jonathan wanted to sell it, Jonathan repaired Jonathan's bike.
f. Jonathan repaired Jonathan's bike.
g. Jonathan felt sorry for some person, so Jonathan repaired that person's bike for that person.

h. Because some person wanted to sell it, Jonathan repaired that person's bike
i. Jonathan repaired some person's bike.

That is, what a pronoun refers to is not always determined by another noun phrase in its sentence. Rather, what a pronoun refers to may be determined by the situational context in which the language is used, as is typically the case in spoken interaction.

We'd like you to notice now that pronouns are typically shorter and communicate far less information than their antecedents. For example, *their* in (2) provides only the information that more than one entity is being referred to (along with the grammatical information that *their* is in the genitive case), clearly far less information than its antecedent, *All of the members of the class*, provides. Using pronouns instead of full noun phrases avoids repetition and reduces the production demands on the speaker or writer and processing demands on hearers or readers.

However, because pronouns provide so little information, hearers/readers expect that speakers/writers will use them only when it is easy to determine what they refer to. If a pronoun's referent is not easily or unambiguously determined, hearers/readers may quickly give up trying to interpret the piece of discourse in which it occurs. In face-to-face communication, the hearer can simply ask the speaker to clarify an unclear reference. But in written communication, this is typically not possible. Because confusion in spoken language can be fairly readily clarified, it tends to have more pronouns than written language. Beginning writers (and sometimes even more advanced ones) often use pronoun patterns typical of spoken language and so must be taught to ensure that the antecedents/referents of their pronouns will be clear to a reader who cannot ask for clarification.

In English, pronouns and their antecedents must have the same person, number, and gender; that is, pronouns must **agree** with their antecedents on these grammatical categories. All of the sentences in (1) illustrate agreement. *Jonathan* and *Jeremy* are each third person, singular, and masculine, and thus require the pronouns *he*, *his*, or *him*.

Exercise

Evaluate the traditional definition of "pronoun."

The traditional definition of "pronoun" applies most readily to some occurrences of the third person pronouns *he*, *she*, *it*, and *they*. While *I* and *you* might be taken as substitutes for noun phrases like *the speaker* and *the addressee*, respectively, this seems unnatural. Would a person who says (4a) of himself say (4b) of himself under the same circumstances? How about (4c) and (4d)?

(4) a. I feel so broke up, I wanna go home. (The Beach Boys)
b. The speaker feels so broke up, he wants to go home. (Not The Beach Boys)
c. I love you.
d. The speaker loves the hearer.

We think not. We think that definitions of pronouns that regard them as replacements for other expressions are fundamentally flawed. We prefer a more general definition:

> *A pronoun is a minimal linguistic form which refers to speaker(s), addressee(s), and other(s), and provides such grammatical information as person, number, gender, case, and humanness.*

These minimal forms reduce the effort required in speaking and writing by eliminating the need to repeat longer expressions when we wish to refer to someone or something more than once. For second and subsequent references we select just enough information to allow our audience to keep track of what we're speaking or writing about. If we choose to use pronouns, because the information they communicate is so minimal, we must use them only when the information they communicate is sufficient to allow an audience to easily figure out what they refer to, either from the co-text or from the situational context. The grammatical agreement expected between a pronoun and its antecedent is crucial for making the pronoun's reference clear.

English contains several different types of pronouns. We will list each type below according to the grammatical categories they represent.

Personal pronouns

Table 1 identifies the categories of personal pronouns:

PERSON	CASE	SINGULAR			PLURAL
First	Nominative	I			we
	Objective	me			us
	Genitive	my			our
		mine			ours
Second	Nominative	you			you
	Objective	you			you
	Genitive	your			your
		yours			yours
		GENDER			
		SINGULAR			PLURAL
		Masculine	Feminine	Neuter	
Third	Nominative	he	she	it	they
	Objective	him	her	it	them
	Genitive	his	her	its	their
		his	hers	its	theirs

TABLE 1: PERSON, NUMBER, GENDER, AND CASE OF PERSONAL PRONOUNS

As Table 1 indicates, the personal pronouns represent the grammatical categories of person, number, case, and gender. **Number** (in modern English) simply distinguishes singular (one) from plural (more than one). The pronoun forms *I*, *you*, *he/she/it* represent distinctions within the person category. **Person** differentiates speakers and those associated with them (first person: *I*, *we*) from addressees (second person: *you*), and from entities that are neither speaker nor addressee (third person: *she*, *he*, *it*, *they*).

The many different forms of the modern English personal pronoun system hint at the morphological complexity of the language a millennium ago. For instance, Old English had pronouns that referred specifically to two people (called "dual" pronouns), thereby creating a three-way number distinction. (We still have the word *both* to refer to two entities and *either/neither* to refer to a choice between two entities.)

Standard English is unusual among languages in that it makes no distinction in the personal pronouns between second person singular and plural—*you* does for both. Many non-standard dialects of English do differentiate singular and plural, e.g., by adding either the ordinary nominal plural ending {-s} (*youse*) or by adding {all} (*you-all* or *y'all*).

Languages with different forms for second person singular and plural include German *du* (informal sg.) and *ihr* (informal pl.); Spanish *tu* (informal sg.) and *vosotros* (informal pl.); French *tu* (sg.) and *vous* (pl.). In French, this distinction does double duty. It can indicate not only the person and number distinction, but also certain aspects of the relationship between a speaker and addressee(s), most notably their relative social statuses and the degree of intimacy between them. Thus, while the French singular pronoun *tu* may be used by an adult to a child, the child would normally use *vous* to the adult. *Tu* can be used between people who are relatively friendly or familiar with each other; *vous* would be used among people who are not on friendly or familiar terms, or in formal situations. The other languages have other pronouns which indicate analogous social distinctions. German uses *Sie* as a polite or formal second person pronoun, pronounced the same as *sie*, the third person plural pronoun. Some varieties of Spanish use *usted* as a polite second person singular form, and *ustedes* as a polite second person plural form. In earlier periods of English, *thou* and its forms *thee*, *thy*, and *thine* were used informally while *you* and its forms were for formal use. The dimensions of status and familiarity have been extensively discussed by linguists and anthropologists under the terms **power** and **solidarity**, respectively, which we return to in our chapter on Language Variation in Book II.

The person distinction is required also to account for certain verb forms, which are most obvious in the present tense singular forms of the verb *be*: first person *am*; second person *are*; third person *is*. Regular verbs in the present tense distinguish third person singular from all other persons by marking it with the ending {-s}: *He/she/it give**s***; *I/you/we/they **give***. Modal verbs do not indicate person at all.

Case of personal pronouns

English masculine and feminine pronouns come in three different forms: *he*, *him*, *his*; *she*, *her*, *hers*. These different forms are said to represent different **cases** of the pronouns. Which case of a pronoun to use depends upon the relation of that word to other parts of the sentence: we use *he* and *she* when the pronoun is the subject of a sentence; *him* and *her* if it is the object of a verb or a preposition; and *his* and *her* if the pronoun modifies a noun. We will use the traditional names to refer to these cases: *he/she* are in the **nominative** case; *him/her* are in the **objective** (a.k.a. **accusative**) case; and *his/her* are in the **genitive**.

English also differentiates other pronouns according to case. Thus *I*, *you*, *we*, *they* are all nominative; *me*, *you*, *us*, *them* are all objective; and *my*, *mine*, *your*, *yours*, *our*, *ours*, *their*, *theirs* are all genitive.

You will no doubt have noticed that there are two genitive forms of certain pronouns, such as *my* and *mine*. The forms corresponding to *my* (*your*, *our*, *their*) are used when they directly modify a noun. Otherwise we use the other genitive forms: *That is **my** horse* as opposed to *That horse is **mine***. The former are sometimes misleadingly referred to as **possessive adjectives**, as they occur before the nouns they modify in the positions believed (wrongly) to be typical of attributive adjectives. The latter are often distinguished as **possessive pronouns** because they appear to replace possessive nouns or noun phrases, e.g., compare *That bike is hers* with *That bike is Kelly's*.

English nouns functioning as heads of subjects do not differ in form from nouns functioning as heads of objects, so we do not distinguish between nominative and objective cases in those instances. Grammarians occasionally refer to the nominative/objective form of nouns as the **common case**.

Earlier forms of English, the classical languages (Latin and Greek), and modern languages such as Finnish have much more elaborate case distinctions than modern English. Table 2 provides a list of some traditional case names and their functions.

NAME	GRAMMATICAL FUNCTION
Nominative	subject
Objective	object
Genitive	modifier, complement
Dative	recipient, beneficiary
Ablative	place from where
Vocative	addressee

TABLE 2: TRADITIONAL CASE NAMES AND FUNCTIONS

Many languages require case markings on parts of speech besides nouns and pronouns. Modern German, for instance, makes case differentiations on both articles and adjectives.

Gender of personal pronouns

The pronoun system of English distinguishes three **genders: masculine** (forms of *he*), **feminine** (forms of *she*), and **neuter** (not neutral!) (forms of *it*), distinguished primarily according to the nature of the objects they refer to. Masculine pronouns refer to males, primarily human males; feminine pronouns refer to females, primarily human females; and neuter pronouns refer either to non-human animals or to entities that are non-animate and consequently are not differentiated according to sex. Infants whose sex is

unknown are also occasionally referred to by neuter pronouns. A system in which the gender of a word depends upon characteristics of its referent is called a **natural gender** system.

Other languages, such as French, German, Italian, Spanish, and Gaelic, have **grammatical gender** systems. The choice of gender is not dependent upon characteristics of a word's referent; rather, words may be assigned to gender classes, often according to formal linguistic criteria. In Italian and Spanish, for example, words ending in {-a} are typically feminine; in German, words ending in {-chen} are typically neuter. However, many nouns in these languages are assigned to gender classes somewhat arbitrarily and so when learning a noun one must also learn its gender. Also in these languages, the gender system is reflected not only in the pronouns and nouns, but in adjectives and articles, too. In Spanish, a noun and any article or adjective modifying it must agree in gender; if the noun is masculine, then any associated article or adjective must be masculine (e.g., *el libro blanco*, lit. the book white, "the white book"). If the noun is feminine, its modifiers must also be feminine (e.g., *la casa blanca*, lit. the house white, "the white house").

In recent years the English gender system has given rise to much discussion of the issue of sexism in language and the need to develop forms that are sex-neutral. Standard written English makes it difficult not to refer to the sex of a human referent when choosing a personal pronoun, regardless of whether the person's sex is relevant or even known or knowable. For example, compare the sentences *Every doctor works hard for her patients* and *Every doctor works hard for his patients*. The first suggests that all doctors are women; the second that they are all men. Clearly neither need be true. Traditional prescriptive grammars have required that the pronoun after quantifiers such as *every* and *some* be masculine—and in general that the generic pronoun be the masculine one. Many people find this norm to be objectionable and would like to find expressions that would not give any indication of the referent's sex for use in situations where sex is irrelevant. Many writers now use forms of *they* when a generic pronoun is required. The following is from a Cambridge University Press publication: . . . *while* ***someone*** *is taking* ***their*** *turn in a conversation,* . . . (Meyer 2002: 76). And growing numbers of organizations require that their publications be sex-neutral. We return to this topic in our chapter on Language Variation in Book II.

Exercise

1. In the passage below (a) identify all the personal pronouns; (b) specify the antecedent of each pronoun; and (c) indicate the case, number, and gender of each pronoun.

> Hercules was the strongest man on earth and he had the supreme self-confidence magnificent physical strength gives. He considered himself on an equality with the gods—and with some reason. They needed his help to conquer the Giants. In the final victory of the Olympians over the brutish sons of Earth, Hercules' arrows played an important part. He treated the gods accordingly. Once when the priestess at Delphi gave no response to the question he asked, he seized the tripod she sat on and declared that he would carry it off and have an oracle of his own. Apollo, of course, would not put up with this, but Hercules was perfectly willing to fight him and Zeus had to intervene. The quarrel was easily settled, however. Hercules was quite good-natured about it. He did not want to quarrel with Apollo, he only wanted an answer from his oracle. If Apollo would give it the matter was settled as far as he was concerned. Apollo on his side, facing this undaunted person, felt an admiration for his boldness and made his priestess deliver the response. (From Edith Hamilton, Mythology)

2. We hope that you noticed in the passage just above that (a) all of the pronouns in the passage are in the third person and (b) they all have an easily determined antecedent in the passage. Consider now first and second person pronouns. Is it possible for them to have a verbal antecedent, or do they always refer to some entity outside the text in which they occur? (A word with this latter property is said to be "deictic," which we discuss further below.) Try to think of examples to support your position. Does your analysis affect our definition of pronouns?

3. Briefly discuss the use of pronouns in the Hercules text in light of our revised definition of pronoun and our discussion of pronoun use.

4. For each of the following pronouns give all the grammatical categories needed to fully characterize it: *they, me, your, him, our, mine*. For example: *hers*—3rd person, singular, feminine, genitive case.

Demonstrative pronouns

English contains only four **demonstrative** pronouns; they appear in Table 3.

	SINGULAR	PLURAL
NEARER	this	these
FARTHER	that	those

TABLE 3: DEMONSTRATIVE PRONOUNS

Demonstrative pronouns have the effect of "pointing out" entities, often for the purpose of contrast or selection.

(5) a. Press *this* button, not *that* one.
b. I'll take one of *these* and one of *those*.

As the examples suggest, speakers may accompany demonstratives with pointing gestures. These forms are sometimes called **deictics**, after a Greek word meaning "to point." In written prose, of course, gestures are not available, so writers must take care to make the referents of the pronouns clear:

(6) Harry told Mabel that Maude had written the letter. This is typical.

What is typical? Harry's telling Mabel? Harry's telling anyone? Maude's writing letters?

Like the genitive personal pronouns, demonstratives may function as heads or as modifiers, but with no change in form.

(7) a. *That* is a serious mistake. (Head)
b. *That* mistake is serious. (Modifier)

Reflexive and intensive pronouns

Reflexive and **intensive** pronouns have the same forms; they begin with a personal pronoun, generally in the genitive case, and end in the morphemes {*-self*} or {*-selves*}, for singular and plural, respectively. The forms are listed in Table 4.

PERSON	SINGULAR	PLURAL
First	myself	ourselves
Second	yourself	yourselves
Third	himself	themselves
	herself	
	itself	

TABLE 4: REFLEXIVE/INTENSIVE PRONOUNS

Exercise

1. Identify the forms in Table 4 that include a genitive personal pronoun.

2. Identify the case of the non-genitive personal pronouns in the forms in Table 4.

3. Many non-standard English dialects use the forms *hisself* and *theirselves*. Why do you think they do that?

We say that these forms are both reflexive and intensive because they are used in two quite distinct ways. We say they are **reflexive** when they are used as the object of a verb or preposition (8a-c); we say they are **intensive** when they are used as modifiers (9, 10).

(8) a. Adelaide hurt *herself*.
b. Adelaide bought *herself* a new Lamborghini.
c. Rudy talks to *himself* a lot.

The pronouns in (8a-c) are reflexive: in (8a) *herself* is the direct object of *hurt*; in (8b) it is the indirect object of *buy*; in (8c) *himself* is the object of the preposition *to*. The pronouns and their antecedents are in different noun phrases.

An intensive pronoun may occur *within* the noun phrase of its antecedent, typically following and modifying its antecedent directly:

(9) Adelaide *herself* completed the audit.

However, an intensive pronoun may also be moved away from the phrase it modifies:

(10) Adelaide completed the audit *herself*.

Sentences with reflexives cannot be related in the way that (9) and (10) are. In other words, sentence (8a) cannot be rearranged as (11) without significantly changing its meaning:

(11) ?Adelaide herself hurt.

Indefinite pronouns

Indefinite pronouns constitute a loose category of words brought together traditionally by the semantic fact that they do not refer to a specific person, place, thing, or idea. The common indefinites are listed in Table 5.

all (1)	another (1)	any (1)
anybody (2)	anyone (2)	both (1)
each (1)	either (1)	everybody (2)
everyone (2)	few (1)	many (1)
most (1)	neither (1)	nobody (2)
no one (2)	none (2)	nothing (2)
one (1)	other (1)	others (2)
several (1)	some (1)	somebody (2)
someone (2)	such (1)	

TABLE 5: INDEFINITE PRONOUNS (1 = MAY BE HEAD OR MODIFIER; 2 = MAY BE HEAD ONLY)

Occasionally, students will misapply the semantic definition and label as indefinites generic nouns such as *people*, collective nouns such as *group* or *crowd*, and abstract nouns such as *concern* or *beauty*. Formally, indefinite pronouns have little if anything in common. They are a "leftover" class to which pronouns that fit in no other category are relegated. The general semantic notion that unifies a majority of indefinites is that of "quantity," e.g., *all*, *many*, *no*, etc. For this reason, members of Table 5 are sometimes assigned to a separate class called **quantifiers**.

Indefinites have a limited range of functions, acting only as heads or modifiers. The functions of individual words are indicated in Table 5.

Exercise

Select any five indefinites labeled as (1) in Table 5. For each, give an example sentence in which the pronoun is used (a) as a head and (b) as a modifier.

Wh-words

Wh-words, such as *who* and *what*, occur in a wide range of constructions. In traditional grammars, they are called **interrogative** or **relative** pronouns. These forms are usually distinguished by the constructions in

which they function, but there is little formal reason to separate them. We thus list them as a single group in Table 6. We will briefly explain their range of functions here and go into more detail in other chapters.

Some of the words in Table 6 are traditionally called pronouns. Because of our emphasis on form, we will not use this label. Some of the members of the group function as pronouns in certain constructions but not in others. To call them pronouns on this limited basis confuses form with function.

who	whom	which
what	whose	when
where	why	whether
how		

TABLE 6: WH-WORDS

The label *wh-word* is a mnemonic that clearly applies to all members of the class except *how*. Nevertheless, this form deserves inclusion on the basis of its grammatical behavior.

Wh-pronouns perform three distinct functions:

a. Introducing information questions
b. Introducing relative clauses
c. Introducing noun clauses

We will illustrate these functions with *who*, *which*, and *where*. We will also indicate cases in which these words can occur as headwords and as modifiers.

An **information question** requests that the hearer respond with some information beyond a mere "yes" or "no." These questions appear with all wh-words (except *whether*). It is in this role that wh-words are traditionally called **interrogative pronouns**.

(12) a. *Who* invented the telescope? (Head)
b. *Which* do you want? (Head)
c. *Which* donut do you want? (Modifier)
d. *Where* did she find that hat? (Head)

Exercise

For each of the wh-words in Table 6 (except *whether*), create three wh-questions.

Wh-words also introduce **relative clauses** (in square brackets in (13)). These clauses modify nouns. In our chapter on Phrases we will see how they follow a head noun as part of a noun phrase. Most wh-words can introduce relatives.

(13) a. Anyone [*who* wants a ticket] should call Herman.
b. The book [*which* you requested] is out of print.
c. The locale [*where* the movie is set] is fictional.
d. The person [*who* called you] left no message.

Exercise

1. For each of the wh-words in Table 6 (except *what* and *whether*), create three sentences with relative clauses.

2. Create a sentence with a relative clause beginning with *what*. Have you ever come across such a relative clause before? How would you change it to make it acceptable in formal English?

Finally, wh-words serve to introduce **noun clauses** (in square brackets in (14)), which are entire clauses that function as if they were noun phrases. (For this reason, the entire clause can often be replaced by a simpler noun phrase or by a pronoun.)

(14) a. I don't know [*who* can get you a leash that big].
b. Tell me [*which* tranquilizer is the strongest].
c. Kong didn't say [*where* he dropped those banana peels].

Exercise

For each of the wh-words in Table 6 (except *whether*), create three sentences containing noun clauses.

Among the wh-words we can detect a second gender system at work in English: *who* refers to humans; *what* to non-humans; and *which* to both humans and non-humans.

Exercise

1. Which wh-word cannot introduce relative clauses in standard English?

2. Create three sentences with *whether*. What grammatical function(s) does it play in your sentences?

ARTICLES

Articles are the last minor class associated with nouns. They always function as modifiers of the head noun in a noun phrase, and traditionally are assumed to contain only two words: the indefinite article *a(n)* and the definite article *the*.

(15) a. a visitor
b. the United Nations

The indefinite article has two written forms, *a* before a spoken consonant and *an* before a spoken vowel; the corresponding spoken forms are /ey/, /æ/, and /æn/, at least when spoken in isolation. The definite article may be pronounced /ðə/ before a spoken consonant and /ði/ before a spoken vowel, though there is no indication of this in the standard spelling. *A* may occur only with a singular noun, whereas *the* may occur with a singular or a plural one.

Generally, *a(n)* and *the* are the only articles recognized for English. However, some linguists would claim that there is a plural of *a*, namely, *some* (pronounced with a very reduced vowel): *You have a visitor* vs. *You have some visitors*. And a case can be made for a zero article: ***The visitors*** *must sign* in vs. ***Visitors*** *must sign in* and ***A/the moose*** *blocked the path* vs. ***Moose*** *is good to eat*.

While the two traditional articles are easily recognized, their meaning is quite complex. They are part of a system of devices that enable communicators to introduce people and things into a discourse and then keep track of them as the discourse continues. Other devices in this system are pronouns and demonstratives, and the distinction between common and proper nouns.

Somewhat simplistically, the system works as follows: indefinite articles signal the entry of a new entity into the discourse, e.g., *Once upon a time there was* ***a*** *big bad wolf.* Once an entity has been introduced, it can be referred to by an appropriate personal pronoun, e.g., ***He*** *lived all alone*. Or it can be assigned a proper name, e.g., *He was called* ***Edgar***, which can

then be used to refer to it, e.g., *One day, **Edgar** was out looking for his next meal*. Later references may be marked by a definite article, e.g., *When **the** wolf came to the edge of the forest, he spotted some children*. When we want to distinguish one entity from another of the same kind, we can use the demonstratives, e.g., *Edgar said to himself, "**This** child looks far tastier than **that** one."* (Using the plural forms of the demonstratives, we can, of course, distinguish multiple entities, e.g., *"But **those** children look tastiest of all!"*)

The definite article, the demonstratives, the personal pronouns, and proper nouns all signal **definiteness**. One major purpose of marking a noun phrase as definite is to indicate the speaker's/writer's assumption that the intended hearer/reader can readily identify what it refers to. The general pattern is that we provide our audiences with only as much information as we think they will need to identify what an NP refers to. (We thereby minimize repetition and the amount of effort we must expend in producing our utterances and the amount of effort we require the audience to expend in interpreting them.) And we can rank the definite expressions according to the amount of information they provide: NPs with demonstratives provide more information than NPs with definite articles, which provide more information than proper names, which provide more information than pronouns.

Another reason for making a noun phrase definite is to indicate that all the entities relevant in a situation are being referred to. Imagine a situation in which there are books strewn on a desk. If we say, *The books should be put back on the shelves*, we will be understood to mean all the books, not just some of them. If we want just some of the books reshelved, then we have to find a characteristic common to the ones we want reshelved and mention that in our sentence, e.g., *The linguistics books should be reshelved*. In this case, we will be understood to mean all the linguistics books.

The indefinite article, *a(n)*, indicates that the speaker/writer assumes that the hearer/reader can not readily identify the referent of the NP. Contrast (16a) and (16b):

(16) a. I saw the wolf. (Speaker presents information as readily accessible to the hearer; e.g., speaker and hearer have already identified a wolf and are now referring to it again)
b. I saw a wolf. (Speaker presents information as not readily accessible to the hearer; e.g., speaker is introducing reference to a wolf into the conversation)

It is for this reason that the indefinite article is normally used to introduce a

new entity or topic into a discourse.

Another important meaning associated with the indefinite article is **categorization** or **classification**: an indefinite NP denotes a member of the category named by the head noun of the NP. Dictionary definitions make use of such categorization. For example:

(17) **catbird** *n.* ***A*** North American songbird (*Dumetella carolinensis*) having predominantly slate plumage (American Heritage Dictionary 4th ed. p. 292)

Here the AHD defines *catbird* by categorizing it as *a* (kind of) North American songbird. Check several other dictionary entries to see if they also use the indefinite article in this way.

Whether a noun is count or non-count affects which articles may modify it. Count nouns may be modified by both articles—by *a* if the noun is singular (*a calculator*), and by *the* if the noun is either singular or plural (*the calculator/s*). Non-count nouns may occur only with *the* (*the information*); indefinite non-count nouns occur with no overt article (*information*) or with *some* (*some information*).

Definite and indefinite NPs may refer either to one or more members of a class of entities or to the entire class. For example, *The pig* in *The pig is a filthy animal* may be interpreted as referring to a single, specific pig or to the entire pig species. When we refer to an entire class, we are said to be making **generic** reference. When we refer to one or more specific entities, we are making **specific** reference. We can also make generic reference using indefinite NPs: *A pig is a filthy animal*; *Pigs are filthy animals*.

Exercise

1. Here are some rules that are typically given for when to use the definite article. For each rule, create three short examples to illustrate it.
   a. Use *the* to mark a noun phrase whose referent is identifiable in the situational context, e.g., *Where's the dean's office?*
   b. Use *the* to mark a noun phrase whose referent has already been introduced, e.g., *A rabbi and a priest went into a bar. The rabbi said to the priest . . .*
   c. Use *the* to mark a noun phrase whose referent is unique, e.g., *the earth, the tallest mountain, the fifth man.*
   d. Use *the* with adjectives and nouns that name groups of people, especially when we are referring to the entire group, e.g., *the*

poor, the Russians.

e. Use *the* with some geographical proper nouns, e.g., *the Pacific, the Philippines,* but cf. *Spain* not **the Spain.*
f. Use *the* in certain date formats, e.g., *the 4th of July.*

2. For each of the following categories of words, determine whether they do or do not typically occur with *the*:

a. Names of years, e.g., *1984.*
b. Names of professions, e.g., *accounting; the law.*
c. Names of languages, e.g., *English.*
d. Names of meals, e.g., *brunch.*
e. Names of individuals, e.g., *Albert.*
f. Titles and names together, e.g., *President Kennedy.*

3. Here are some rules that are typically given for when to use an indefinite article. (Remember to use *a* as the singular indefinite and either *some* or no article at all for the plural, e.g., *a book, some books, books.*) For each rule, create a short example to illustrate it.

a. Use an indefinite article for the first mention of an entity or entities in a discourse, e.g., *For **a** soccer fan, few things are as exciting as the World Cup. The surgeon introduced **some** radioactive dye into the patient's arteries. Brain injuries are frequent in combat* [NB no article modifies *Brain injuries*].
b. Use an indefinite article or no article to classify/categorize, e.g., *She is **a** doctor. They are doctors.*
c. Use an indefinite article or no article with certain numbers, e.g., *a hundred, thousands.*

4. English articles pose considerable difficulties from ESL and EFL learners, at least partly because of the complexity of the English system, but also because languages differ in whether they have articles at all (Latin had none), how many articles they have (Irish has only a definite article), and what information the articles communicate (Spanish and French articles include information about the number and gender of the nouns they modify; German articles are marked for gender, case, and number). The following are texts by learners of English. Examine each noun phrase in them and discuss any that seem not to be idiomatic English because of the writer's choice of definite or indefinite expression.

a. With the high technology people have taken more information

about world.
b. The average citizen in my country had access to a fast communication.
c. Many people didn't have computer and television and didn't use internet.
d. Starcraft is very famous game.
e. My professor teach us throughout the computer.
f. People listen the music everywhere.
g. Because of improvement in technology people come to know how then can compete.
h. . . . industry that have possibility of pollution . . .
i. In past years, we had to use public phone to call in the street.
j. We had to wait for long time to call.
k. Using mobile phone is become very important to our lives.
l. People can use internet to shop.
m. Government give the money to old people.
n. Technology has unbelievably improved the lifestyle of average citizen.

5. The following excerpt is from Jane Austen's *Sense and Sensibility* (1811/1961: 1-2). We have highlighted several NPs. Read through the passage and then for each highlighted NP, determine whether it is definite or indefinite. If it is definite, specify the grammatical device that makes it so (e.g., definite article, pronoun, proper name, etc.). Then, using the discussion of articles above, say why each NP is definite or indefinite, and if definite, say why it has the form it has.

> The family of Dashwood had been long settled in Sussex. Their estate was large, and their residence was at Norland Park, in the centre of their property, where for many generations they had lived in so respectable a manner as to engage the general good opinion of their surrounding acquaintances. The late owner of this estate was a single man, who lived to a very advanced age, and who for many years of his life had a constant companion and housekeeper in his sister. But her death, which happened ten years before his own, produced a great alteration in his home; for to supply her loss, he invited and received into his house the family of his nephew, Mr. Henry Dashwood, the legal inheritor of the Norland estate, and the person to whom he intended to bequeath it. In the society of his nephew and neice, and their children, the old gentleman's days were comfortably spent. His

attachment to them all increased. The constant attention of Mr. and Mrs. Henry Dashwood to his wishes, which proceeded not merely from interest, but from goodness of heart, gave him every degree of solid comfort which his age could receive; and the cheerfulness of the children added a relish to his existence.

By a former marriage, Mr. Henry Dashwood had one son; by his present lady, three daughters. The son, a steady, respectable young man, was amply provided for by the fortune of his mother, which had been large, and half of which devolved on him on his coming of age. By his own marriage, likewise, which happened soon afterwards, he added to his wealth. To him, therefore, the succession to the Norland estate was not so really important as to his sisters; for their fortune, independent on what might arise to them from their father's inheriting that property, could be but small.

AUXILIARY VERBS

In this section we discuss **auxiliary verbs**, which we mentioned in passing in our chapter on Major Parts of Speech. Auxiliary verbs always occur with a main verb, though the main verb may be "understood," that is, omitted and implied, e.g., *Did John leave? He did* [*leave*]. There are only a few auxiliaries in the language, but each plays several important grammatical and semantic roles. The English auxiliaries are: *be*, *have*, and the **modal** verbs, *can*, *could*; *may*, *might*; *shall*, *should*; *will*, *would*; *must*; and *do*, which has no meaning but patterns grammatically like a modal. *Be* is used with a verb in its Ving form to indicate the progressive aspect, e.g., *The students* ***are working*** *on their term papers*. *Be* is also used with a past participle verb form, Ven, to create the passive voice, e.g., *This book* ***was written*** *by two loony linguists*. *Have* is used with a Ven form to create the perfect aspect, e.g., *The semester* ***has come*** *to an end*. *Do* and the modals are followed by a verb in its uninflected form, the form used to cite it in a dictionary, e.g., *We* ***shall overcome***. We discuss the progressive and perfect aspects in our chapter on Basic Clause Patterns.

Auxiliary verbs are optional elements in a clause, but up to four may occur together. Regardless of how many occur, they always follow this order: modal, *have*, progressive *be*, and passive *be*, as you can demonstrate for yourself by rearranging them in, *She may have been being spied on by Homeland Security agents*. You should find that all other orders are ungrammatical.

The first auxiliary in a sentence is extremely important. First, it is the one

that is marked for tense, if the clause is finite. In *She should have been working on her term paper*, *should* is the first auxiliary and its {-d} indicates that it is in the past tense. You can convince yourself of the accuracy of this rule by removing the past tense marker from *should* and placing it on any of the other auxiliaries and main verb, e.g., **She shall* ***had*** *been working on her term paper*. You should find that all other orders are ungrammatical. We discuss tense in our chapter on Basic Clause Patterns.

Second, in interrogative clauses, it is always the first auxiliary that is moved to the left of the subject. If we turn *She could have been seriously injured!* into a question, it is the *could* (as the first auxiliary) that moves: *Could she have been seriously injured?* Again, you can test the accuracy of our rule by moving other auxiliaries to the left of the subject, e.g., ****Have*** *she could been seriously injured?*

Third, in negated sentences, the negative particle *not* is typically placed after the first auxiliary, e.g., *He has* ***not*** *been studying very hard lately*. Try placing it elsewhere in the sequence to see what happens.

Modal verbs

If a modal verb occurs in a clause, it will, as we noted, be the first of any auxiliaries that clause contains. Besides occupying the same sentential position, modals express related concepts. These concepts include notions such as (a) **necessity**, either logical or social (obligation): *You must read the book*; (b) **possibility**, logical or social (permission): *He may leave the room*; (c) **ability**: *He can do long division in his head*; or (d) **intention**, either definite or conditional: *I will/would/shall/should write another 10 pages today*. What these modal concepts all have in common is that they indicate the basis for the speaker's judgment or belief about the truth of the sentence.

We can view the {-d/t} at the end of the second member of each pair of modals as a variant of the past tense inflection {-ed}. This allows us to regard each pair (excluding *must*) as comprising a present and a past tense form. To see why this is so, consider the phenomenon called **backshifting**. Backshifting involves the change from present tense to past tense forms when direct speech, e.g., *John* ***is*** *flying to Toronto tomorrow*, is converted into indirect speech when the verb of the main clause is in the past tense: *John* ***said*** *that he* ***was*** *flying to Toronto tomorrow*. Sentences involving modals require a shift from the basic form to the past tense, {-d/t}, form: *John* ***will*** *fly out tomorrow* becomes *John said that he* ***would*** *fly out tomorrow*.

Exercise

The following text is from the mystery novel *Farriers' Lane,* by Anne Perry (1993: 285). It occurs after the discovery of a policeman's (Paterson) body hanging in his bedroom. (a) Identify all the modal verbs in the passage. (b) Discuss each one using the framework for understanding modals presented just above. Remember that each modal may serve more than one purpose. (c) You should also note that the modals occur in the later part of each paragraph. Why do you think the author shifted to the use of modals as she did? (d) The novel contains many passages with lots of modal verbs in them. Why do you think that modals might suit a mystery writer's purposes?

> He touched Paterson's hand. The body swung very slightly. The flesh was cold, the arm rigid. He had been dead several hours. He was dressed in plain dark uniform trousers and tunic, which was torn, his sergeant's insignia ripped off. He still wore his boots. It was nearly midday now. Presumably it was what he had worn when he came home from the last duty of the day before. If he had slept here, risen in the morning and dressed ready to go out, the body would still have some warmth left, and be limp. He must have died sometime late yesterday evening, or during the night. It would almost certainly be the evening. Why should he be wearing his street clothes all night?
>
> The hook was in the middle of the ceiling, about ten or eleven feet high, where one would expect to find a chandelier. There was no furniture near enough to it for him to have climbed on. It had taken a strong man to lift Paterson up and then let him fall from that height. He must have used the rope as a pulley over the hook. There was no conceivable way Paterson could have done it himself, even supposing he had some cause to, or believed he had.

Negation

Negating a clause is primarily done by inserting the negative particle *not*. If the clause has one or more auxiliary verbs, *not* is typically placed after the first auxiliary, though it can occur elsewhere: *He must* ***not*** *have arrived yet*. If the clause does not have an auxiliary, then the "dummy" auxiliary *do* is inserted into the first auxiliary position and *not* is placed after it: *He did not arrive on time*. Cf. **He not arrived on time*.

Not may be contracted (i.e., reduced) and attached to the auxiliary immediately before it: *He **didn't** arrive on time; He **mustn't** have arrived yet*.

Mood, modality, aspect, tense, voice, and negation may be combined: *Couldn't she have been being followed by the FBI?*

PREPOSITIONS

Prepositions (P) combine with noun phrases to form prepositional phrases (PPs). They are important to English because PPs play a wide range of grammatical roles. In other languages—and in earlier stages of English—prepositions play a less significant role because some of their jobs are carried out by inflectional affixes. Prepositions also express many of the major semantic relations that integrate parts of a sentence into a grammatical and meaningful whole. It is thus important for teachers and students to become familiar with, not learn by heart, the approximately 50 members of this class.

about	above	across	after	against
along	amid(st)	among	around	astride
at	before	behind	below	beneath
beside(s)	between	beyond	but (= except)	by
concerning	down	during	except	from
in	inside	into	like	of
on	onto	out	outside	over
since	through	throughout	till	to
toward	under	underneath	until	unto
up	upon	with	within	without

TABLE 7: SINGLE-WORD PREPOSITIONS

In spite of the significance of prepositions, standard grammars often assign them rather vague definitions, such as "a word that shows the relation of a noun or pronoun to some other word in a sentence" or, misleading ones, such as "a word followed by a noun or a pronoun." English **prepositions** are uninflected words that take NP objects to form prepositional phrases. In functional terms, a preposition in a PP functions as the **head** of that prepositional phrase. The preposition signals the grammatical and/or semantic role played by the PP in its clause.

PPs play a broad range of roles in English phrases and sentences, including modification of nouns, e.g., in *The trunk of the car*, the PP *of the car* consists of the preposition *of* and its object *the Shrew* and modifies the noun *trunk*. PPs complement verbs and adjectives, e.g., in *give it to her*, the PP *to her* is a

complement of the verb *give*, and in *conscious of her surroundings*, the PP *of her surroundings* complements the adjective *conscious*.

The following are some examples of PPs; the preposition is italicized:

(18) a. *of* my toe
b. *to* Tangiers
c. *beneath* contempt

Exercise

1. Select five prepositions from Table 7 and create a prepositional phrase around each using the phrases in (18) as models.
2. In the paragraph just beneath Table 7, (a) identify all of the prepositions, referring to Table 7 as necessary, and (b) paraphrase the meaning of each preposition.

Though prepositions are generally followed immediately by noun phrases, in wh-clauses a NP may be moved away from its preposition:

(19) a. What did you call *about*? (cf. You called *about what*?)
b. She asked what you called *about*.
c. The lamp which you called *about* has been sold.

In these cases, the NP objects of the prepositions (*what* and *which*) have moved elsewhere in the sentence, and in fact precede their prepositions. In a sense the preposition has been abandoned by its object NP; for this reason, we call such cases **preposition stranding**. The stranding of prepositions is sometimes criticized in prescriptive circles, but in many cases unstranded prepositions sound either stilted or downright ungrammatical:

(20) a. ?About what did you call?
b. *She asked about what you called.
c. The lamp about which you called has been sold.

Aside from their behavior in such cases, though, prepositions are formally very simple.

Before examining the semantics of prepositions, we should mention one further formal complexity—the tendency of prepositions to enter into complex frozen expressions that resemble idioms; Table 8 lists some examples.

according to	along with	with respect to
apart from	as for	round about
by means of	with regard to	with reference to
by reason of	by virtue of	on account of
by way of	except for	out of
in accord(ance) with	in addition to	in spite of
in case of	in compliance with	instead of
in opposition to	in place of	in regard to

TABLE 8: MULTI-WORD PREPOSITIONS

The structure of these multi-word prepositions falls into two patterns: (a) preposition + noun + preposition (P + N + P; e.g., *by means of*, *in case of*) and (b) miscellaneous word + preposition (X + P; e.g., *according to*, *because of*). It would, of course, be possible to view such expressions—particularly the P + N + P type—as simply combinations of two prepositional phrases; however, most speakers perceive them as grammatical units. We will not take a hard-and-fast position on this issue, but simply note, as do most grammars, the presence of such constructions.

Exercise

Select five of the multi-word prepositions from Table 8 and create a PP around each one, e.g., *in spite of his insistence*.

Prepositions cover a wide range of meanings. Traditional categories, along with some typical examples, are given in Table 9.

Place (Locative):	above, around, at, behind, beneath, between
Direction:	up, down
Time (Temporal):	about, after, at, during, for, since
Manner:	with (*exit* ***with a flourish***)
Accompaniment:	with (*went* ***with Flora***)
Instrument (Means):	by, with (*open it* ***with a knife***)
Recipient:	to (*gave it* ***to Lucy***)
Beneficiary:	for (*did it* ***for Lucy***)
Miscellaneous:	of, about, like, without

TABLE 9: SEMANTIC TYPES OF PREPOSITIONS

Exercise

Create three PPs to represent each of the semantic categories in Table 9.

Many individual prepositions have several meanings. For example, what meanings of *around* and *beneath* occur in sentences (21) and (22)?

(21) a. They walked *around* the statue.
b. I'll return *around* 5:00.
(22) a. Horace stood *beneath* the Balancing Rock.
b. Horace is *beneath* contempt.

This variety of meanings sometimes creates confusion for students, particularly those who simplistically associate certain structures with prepositions. For instance, the indirect object construction (e.g., *He gave Hilda the bike*; *He bought Hilda a bike*) is sometimes associated with paraphrases using the prepositions *to* (*He gave the bike to Hilda*) and *for* (*He bought a bike for Hilda*). However, this semantic relation emerges only when *to* has a Recipient meaning and *for* has a Beneficiary meaning. For example, the indirect object sentences in (23a, b) can be rephrased as the sentences with *to* and *for* in (23c, d). In contrast, when we try to rephrase the *to* and *for* in sentences (24a, b) as indirect object sentences, the results, (24c, d), are ungrammatical. This is because *to* and *for* in (24) do not have Recipient and Beneficiary interpretations, respectively.

(23) a. I offered Hickle a dozen widgets.
b. I made Hickle an artificial earlobe.
c. I offered a dozen widgets to Hickle.
d. I made an artificial earlobe for Hickle.
(24) a. I sent Hickle to the lake.
b. I made an artificial earlobe for $3,000.
c. *I sent the lake Hickle.
d. *I made $3,000 an artificial earlobe.

Exercise

What, if any, difference in meaning do you perceive between *He bought Hilda a bike* and *He bought a bike for Hilda?* (Hint: which sentence more strongly suggests that Hilda actually got the bike?)

Two other potential problems for students derive from the ability of many of these words to occur as **particles** (25a), and as **adverbs**, modifiers of verbs (25b).

(25) a. I called my sister up.
b. I looked up.

Let's consider the complexities of the word *down* using the following sentences as our data:

(26) a. I cut down the tree.
b. I fell down the hill.
c. I cut the tree down.
d.*I fell the hill down.
e.*Down the tree I cut.
f. Down the hill I fell.
g. I cut it down
h.*I fell it down.
i. *I cut down it.
j. I fell down it.

Sentences (26a, b) appear to be parallel because in both, *down* appears before the NPs *the tree* and *the hill*. However, this parallelism is broken in (26c, d). In (26c) *down* is grammatical after the NP, but in (26d) it is not. This difference in behavior suggests that *down* may represent two different parts of speech in these sentences. Semantically, we sense an idiomatic unity in *cut down* that we do not sense in *fell down*. In fact, *cut down* could be replaced by one word: *toppled* or *felled*. On formal and semantic grounds, then, *down* seems to represent different parts of speech in (26a) and (26b). The fact that *down the hill* seems to have moved as a single unit in (26f) suggests that in that and related sentences, *down* is a preposition heading a prepositional phrase. For *down* in (26a), we have no ready-made traditional label. In such sentences we will call it a **particle**, using a term coined recently by linguists, and verb + particle combinations like *cut down*, *look up* we will call **phrasal verbs**.

Next, consider the word *down* in the sentences below:

(27) a. I fell down the hill.
b. I fell down.

Assuming that *down* is a true preposition in (27a), we note in (27b) that

down is not followed by a noun phrase, nor has it been stranded, since no noun phrase that could be construed as its object occurs elsewhere in the sentence. Moreover, we do not infer from (27b) that I fell down some inclined place—any more than we understand that some object did or did not cause me to fall. Since we cannot apply any test of moveability to the right that helped us to identify particles, we have no justification for calling *down* in (27b) a particle. Must we then invent a new part of speech? The answer is YES—unless we can fit the word into some other existing part of speech. Can you think of a candidate for the word *down*? Consider sentences (28a-d):

(28) a. Harriet visited often.
b. Often, Harriet visited.
c. I fell down.
d. Down I fell.

These sentences provide evidence that *down* in (27b/28c) may be an adverb, since it fits criteria for adverbs (namely, that of relative moveability), that it modifies a verb, and that it represents direction. In practice, we would like to have more support for our analysis than this, but sometimes we do not have that luxury.

We should note, however, the semantic motivation for the tendency of prepositions to blend with adverbs. If you turn back to our discussion of adverbs, you will notice that the meanings expressed by adverbs (e.g., Time, Place, and Manner) partially coincide with those of prepositions. This tendency for parts of speech to overlap in meaning is just one more reason to prefer an analysis that separates them on the basis of form.

INTENSIFIERS

Our earlier discussion of adjectives and adverbs made reference to a class of words specifically associated with them. This class includes words like *more*, *most*, *very*, *quite*, *rather*, *somewhat*, and a few others. Traditional grammars often call such words *degree adverbs*, as if they were ordinary adverbs—like *extremely* and *thoroughly*—that happen to indicate the extent to which the meaning of the adjective or adverb holds. If you consider the criteria for adverbs that we suggested earlier, you will quickly realize that the words we have listed as intensifiers—even though they do indicate degree—do not share the formal or functional characteristics of adverbs. For instance, intensifiers do not have the moveability of true adverbs, nor can they occur in the comparative or superlative constructions, nor can

one intensifier be modified by another.

(29) a. *morer
b. *mostest
c. *more quite
d. *most rather
e. *very quite
f. *rather very

In contrast, real degree adverbs (e.g., *extremely* and *thoroughly*) do allow these possibilities.

(30) a. more extremely
b. quite extremely
c. very thoroughly
d. rather thoroughly
e. extremely thoroughly

We will thus refer to the members of this small class of words as **intensifiers** rather than as adverbs.

CONJUNCTIONS

The word **conjunction** indicates the major role of these words, namely, to join (*junction*) together (*con-*) two or more grammatical elements called **conjuncts**. The difference between **coordinating** and **subordinating** conjunctions reflects the differing grammatical statuses of the conjuncts that are united.

Coordinating conjunctions

The major one- and two-word **coordinating conjunctions** appear in Table 10.

Single Word Coordinating Conjunctions: and, but, or
Minor or Marginal Coordinating Conjunctions: for, so, nor
Multi-word Coordinating Conjunctions (Correlative Conjunctions): both…and; not only…but (also); either…or; whether…or; neither…nor

TABLE 10: COORDINATING CONJUNCTIONS

Since multi-word coordinators require their members to correlate (relate together) with their conjuncts, they are often called **correlative conjunctions**.

(31) a. Jack *and* Jill ran up the hill. (Single word)
b. *Both* Jack *and* Jill ran up the hill. (Correlative)

The units connected by coordinators may be of any size—word, phrase, clause, or sentence. We show some typical instances below.

Two words

(32) a. Tarzan and Jane [got married] (nouns)
b. wrote and sang [the song] (verbs)
c. can and will (modals)
d. eager and willing (adjectives)
e. wildly and frantically (adverbs)
f. he and she (personal pronouns)
g. this and that (demonstrative pronouns)
h. any and all (indefinities)
i. who and why (wh-words)
j. in and about (prepositions)

Two phrases

(33) a. many readers and some literary critics (noun phrases)
b. may disagree and often have disagreed (verb phrases)
c. extremely old and completely dilapidated (adjective phrases)
d. very boldly and amazingly often (adverbial phrases)
e. of the people and for the people (prepositional phrases)

Two clauses

(34) a. who comes early and who brings a camera (relative clauses)
b. that I am right and that you are wrong (noun clauses)
c. after the game ended and before the cleanup crew arrived (adverbial clauses)

Two sentences

(35) Lou admitted his mistake and Bud forgave him.

Generally, the two conjuncts will be of the same type (i.e., noun and noun, verb phrase and verb phrase, relative clause and relative clause). How-

ever, in some instances formally dissimilar structures may be conjoined, as in (36).

(36) quietly and without leaving a trace (adverb and prepositional phrase)

The two unlike conjuncts must be functionally and semantically similar. Sentence (36) conjoins two modifiers that indicate Manner.

Other cases in which coordinators appear to connect unlike units arise when ellipsis occurs, as in (37):

(37) Lou admitted his mistake, but Bud didn't.

In such examples, however, the difference in conjuncts is illusory, for the second conjunct can be reconstructed as a structure formally comparable to the first, as the paraphrase (38) indicates.

(38) Lou admitted his mistake, but Bud did not admit his mistake.

The literal meaning of *and* is equivalent to mathematical +, or logical &. So *Jack and Jill* means *Jack +/& Jill*. So if *Jack and Jill went up the hill* is true, then *Jack went up the hill* is true and *Jill went up the hill* is true. However, in certain contexts, *and* communicates more than just +/&. For example, we would normally interpret *Jack fell down and broke his crown* to mean *Jack fell down and then because he fell down he broke his crown*. So, amongst other meanings, *and* can communicate the order in which events took place and that an earlier event caused a later one.

The literal meaning *but* is pretty much equivalent to that of *and*, namely that both conjuncts are true. However, *but* adds the complication that an expectation set up by the first conjunct is to be rejected. For example, if you go to the dean's office and ask her assistant whether she is in, you might get the response, *She's in, but you can't see her now.* In this case, *She's in* is true and *You can't see her now* is true. *But* acknowledges that if *She's in* is true, then you might reasonably expect that you would be able to see her; however, it rejects this expectation.

Like *and*, *or* can conjoin an indefinite number of expressions. Generally when *or* conjoins expressions it indicates that only one of the expressions is true. For example, if I say *George, Dick, or Albert should go to jail* then I am saying that only one of the three should go to jail. However, I can override this exclusivity by adding something like, *or all three*.

Subordinating conjunctions

Subordinating conjunctions, as the name suggests, differ from coordinators by connecting structures of unequal grammatical status. In subordination, one of the structures is grammatically superior or **dominant** and the other is grammatically inferior or **subordinate**. The subordinate structure is a sub-part of the larger, dominant structure. As you'd expect, the subordinate structure is the one introduced by the subordinating conjunction.

A second difference between coordinating and subordinating conjunctions is that the latter have a restricted range; they can connect *clauses only*. Thus a structure introduced by a subordinating conjunction will be a subordinate clause. (It is, of course, possible for one clause to be subordinate (bolded) to a clause that is itself subordinate (underlined), for example, *The TV news reported* <u>*that the nominee claimed*</u> ***that he was not a crook***.)

We will investigate subordinate clauses more fully in our chapter on Multiclause Sentences. For the moment, we will simply mention three important types of subordinate clause and identify the conjunctions that may introduce them.

The subordinating conjunctions are classified according to the type of clause they introduce. The three types of subordinate clauses are **adverbial**, **nominal**, and **relative**.

Subordinating adverbial conjunctions

Adverbial clauses, like adverbs, function as modifiers of verbs or sentences. They are introduced by a group of words that we will call **subordinating adverbial conjunctions** (**SAC**). Table 11 lists the main SACs.

Time:	after, as, as long as, as soon as, before, just as, now that, since, until, till, when, whenever, while
Place:	where, wherever
Manner:	as, as if, as though
Reason or Cause:	as, because, inasmuch as, since
Result:	so...that, so that, such...that
Comparison:	as, as...as, just as, so...as, than
Purpose:	in order that, lest, so, so that, that
Condition:	as long as, if, on (the) condition that, provided, provided that, unless
Concession:	although, even if, even though, though, while, whereas

TABLE 11: SUBORDINATING ADVERBIAL CONJUNCTIONS

Table 11 groups SACs semantically, in a way that makes clear their overlap with adverbs. As we have just seen, prepositions also overlap with adverbs, so it should come as no surprise that prepositions have affinities with SACs. These affinities are more than semantic. Several items of Table 11 also appear on the lists of prepositions (Table 7 and 8). Because of this overlap, students may experience difficulties in telling a preposition from a SAC—and a prepositional phrase from an adverbial clause. A simple way to keep the two clear is to remember that a preposition only occurs in construction with a following noun phrase and a SAC is followed by a clause. Let's consider an example.

(39) a. I left after the party.
b. I left after the party ended.

In (39a), *after* is followed only by a noun phrase (*the party*) and so must be a preposition. In (39b), *after* is followed by both a noun phrase (*the party*) and a verb phrase (*ended*) that together constitute a clause; thus *after* is a SAC in (39b). We can confirm our formal analysis further by moving the group of words *after the party*.

(40) a. After the party, I left.
b.*After the party, I left ended.

Since phrases often move as a unit, the prepositional phrase in (39a) can be relocated at the front of the sentence, as it has been in (40a). But in (39b), *after the party* cannot be moved, as the ungrammaticality of (40b) shows. Thus it must not be a complete expression. In fact, the structure governed by *after* in (40b) is the clause *the party ended*, as (41) shows.

(41) After the party ended, I left.

Clauses like *after the party ended* are adverbial because they function much as adverbs do, they have meanings similar to those of adverbs, and they are relatively moveable.

Exercise

Create at least one sentence containing an adverbial clause for each of the semantic categories represented in Table 11.

Nominal conjunctions

Nominal clauses function just like noun phrases typically function—i.e., as subjects, objects, and complements. When they do, they are introduced by a set of subordinating conjunctions that includes most of the wh-words listed in Table 6 along with the word *that*. Thus, once you know the wh-words, you do not need to learn a separate list of nominal subordinating conjunctions. To illustrate, note the sentences in (42).

(42) a. I didn't know [*who(m)* I should call.]
b. [*What* you don't know] might hurt you.
c. [*Why* Zangooli fled] is not clear.
d. I suspected [*that* he was wanted by the police.]

To assure yourself that the clauses truly have a nominal function, replace them with the pronouns *it* or *that*.

Exercise

Create at least six more examples of sentences containing nominal clauses modeled on (42a-d). Test that you really have created nominal clauses by replacing them with *it* or *that*.

Relative conjunctions

Relative clauses function as modifiers of the nouns they follow. Typically, they are introduced by a wh-word, (in this function, traditionally called **relative pronouns**), or by *that*. For example:

(43) a. Anyone [*who* knows the answer] will receive a prize.
b. The cat [*that* caught the mouse] was jubilant.
c. The reason [*why* she left] wasn't clear.
d. I anticipate the day [*when* the world will be at peace.]

Exercise

Create at least six more examples of relative clauses modeled on (43a-d). Identify their conjunctions.

Some complexities of subordinating conjunctions

Subordinating conjunctions have several properties that make them more complicated than this basic presentation suggests. One that deserves mention is the tendency of subordinating conjunctions to be omitted from sentences in which their presence is easily inferred. Examples from each type occur in (44).

(44) a. I am so tired [_____ I could sleep on a bed of nails.]
(SAC: *so . . . that*)
b. Everyone said [_____ they had a good time.]
(Nominal: *that*)
c. The reason [_____ she left] wasn't clear.
(Relative: *why* or *that*)

A note on *that*

Grammatically, *that* is particularly interesting, largely because it belongs to at least four different parts of speech. First, it can be a demonstrative pronoun that functions either as a modifier (e.g., ***That*** *answer is correct*) or as the head of a noun phrase (e.g., ***That*** *is correct*). Second, it can introduce a relative clause (e.g., *The answer* ***that*** *she gave was correct*). Third, *that* can act as a noun clause connector (e.g., *I said* ***that*** *the answer was correct*). Fourth, it can appear as part of a subordinating adverbial conjunction indicating either result or purpose (e.g., *The answer was* ***so*** *persuasive* ***that*** *it astounded us all. The answer was phrased* ***so that*** *it would confuse everyone*).

So how can you determine which class *that* belongs to in a particular sentence? One useful test is that of substitution. If you can substitute *it* for *that* you have a headword demonstrative; if you can substitute *the*, you have a modifying demonstrative; if you can substitute *who* or *which* for *that*, it introduces a relative clause. If you cannot make any of these replacements, you have either a noun clause connector or a SAC. Distinguishing the SAC is very simple, since it occurs normally with the word *so* either next to it or nearby.

Other minor parts of speech

While our catalogue of parts of speech includes nearly all the words of English, we should ask whether other categories might be identified. There is no reason in principle to believe that we have discovered all the parts of speech, any more than to believe that we have discovered all the inhabitable planets in our galaxy. Certainly, we would expect to find other parts of speech if we dealt with languages other than English. Japanese, for instance, has words similar to

our prepositions, except that they follow rather than precede their associated noun phrases. Thus English *of a book* would be rendered in Japanese as *hon ni* (literally, *book of*). Because they follow their nouns, these Japanese words are often called **postpositions**.

Those familiar with traditional grammar will also recall one part of speech that we have not mentioned, the **interjection**. This class includes words such as *shucks*, *darn*, *gee*, *wow*, and a host of saltier expressions. Usually a grammar will list the tamer interjections and let the matter drop.

Interjections have some interesting properties. First, they are not grammatically connected to other parts of the sentences in which they occur, and consequently are typically separated from the remainder of their sentence by commas. They typically indicate the speaker's attitude or feelings about what he is expressing (e.g., ***Well**, our budget deficit is not as large as that of the Axis of Evil*).

Individual expressions also have certain unusual properties. *Darn*, for example, enters into a variety of constructions:

(45) a. Darn it!
b. That darn cat!
c. I don't give a darn.

In (45a), *darn*, seems to act like a verb expressing a wish for damnation (*darn*, of course, is a euphemism for *damn*), though its literal meaning is rarely intended, since even atheists can use it. In (45b), *darn* seems to modify *cat* though it is not an adjective by formal criteria: **that darner cat*, **that darnest cat*, **that very darn cat*, though we can say, *The darndest thing happened*. (45c) suggests that *darn* could be a noun, though we don't seem to be able to give more than one darn at a time: ?*I don't give two darns*.

Aside from interjections, we have already seen one important way in which new parts of speech may emerge. They may be distinguished from other classes of which they were thought to be normal members. For instance, we separated intensifiers from the category of adverbs and particles from prepositions. In distinguishing a group of words as a separate part of speech, linguists attempt to direct our attention to a set of formal, functional, or semantic similarities and differences. As a result, some categories will be particular to a specific book rather than to English grammar in general. The practice of reclassifying words is, in fact, relatively common, especially as we discover more about language. Studying parts of speech mirrors the study of ecological characteristics of plants and animals in nature, so it should not be surprising that, as we learn more about a particular

species, we discover unexpected similarities between it and other apparently unrelated species. Thus if prepositions and adverbs are not as distinct as we once thought, our discovery of this fact derives from our closer observation of their verbal ecology.

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GLOSSARY

ACTIVE: a grammatical voice, expressed without *be* + Ven. See **PASSIVE**.

ACCUSATIVE (also called **OBJECTIVE**): case of pronouns associated with direct objects and objects of prepositions.

ADVERBIAL CLAUSE: subordinate clause that functions as an adverbial. See **NOMINAL CLAUSE** and **RELATIVE CLAUSE.**

ASPECT: a category of a verb phrase signaled by inflection, auxiliary verbs, and other constructions, e.g., progressive, perfect, habitual.

ATTRIBUTIVE NOUN PHRASE: a NP that provides a description but does not refer to any particular individual. See **REFERRING NOUN PHRASE.**

AUXILIARY VERB: a verb used with a main verb to indicate aspect, voice, and

modality.

CASE FORM: one of the inflectional variants of a noun, pronoun, adjective, or (in some languages) article.

COMMON CASE: the uninflected form of English nouns found in subject and object functions.

CONJUNCT: a grammatical element connected by a coordinating or subordinating conjunction to another grammatical element.

CONJUNCTION: a function word that joins grammatical elements either as coordinate to each other or as one subordinate to the other.

CONTENT WORD: nouns, verbs, adjectives, and adverbs. See chapter on Major Parts of Speech.

COORDINATING CONJUNCTION: a function word such as *and*, *but*, *or*, etc. that connects grammatically equal elements. See **SUBORDINATING CONJUNCTION**.

CO-REFERENCE: property of noun phrases denoting the same entity; applies to a pronoun and its antecedent or to two noun phrases.

CORRELATIVE CONJUNCTION: a multiple-word coordinating conjunction, e.g., *both...and*, *either...or*.

DECLARATIVE (also called **INDICATIVE**): in traditional grammar, the mood of a sentence used to make an assertion.

DEFINITENESS: property of some NPs (and the (pro)nouns and articles they contain), which denote a speaker's assumption that their referent can be readily identified. See **INDEFINITENESS**.

DEICTIC: words like the **DEMONSTRATIVES**, whose referents depend upon the situations they occur in, and which change from use to use.

DEMONSTRATIVE: the deictic words *this*, *that*, *these*, and *those*. See **DEICTIC**.

FUNCTION WORDS (also called **STRUCTURE WORDS**): words such as prepositions, auxiliaries, and articles that are used frequently in a language to signal recurrent semantic and grammatical information.

GENDER: linguistic category distinguishing words or the entities they denote as masculine, feminine, or neuter; signaled by pronouns and suffixes. Languages other than English may signal gender by adjective inflection, articles, verb agreement, etc.

GENERIC: property of an article whereby it designates an entire class. See **SPECIFIC**.

GENERIC PRONOUN: pronoun that makes no gender distinction, e.g., *one*.

GENITIVE: case signaled by *'s* and *s'*, indicating a variety of semantic relations, including possession, authorship, involvement with, and many less specific relations. Also called the possessive case.

IMPERATIVE: in traditional grammar, the mood of a sentence used to give a command.

INDEFINITENESS: property of some NPs (and the (pro)nouns and articles they contain), which denote a speaker's assumption that their referent cannot be specifically identified. See **DEFINITENESS**.

INDICATIVE: See **DECLARATIVE**.

INFORMATION QUESTION: a question, introduced by a wh-word, requesting information rather than a yes-no response. See **YES-NO QUESTION**.

INTENSIFIER: a function word (typically *more*, *most*, *very*, *quite*, *rather*, and *somewhat*) used to modify an adjective or an adverb.

INTENSIVE PRONOUN: a pronoun ending in *-self* or *-selves* that ordinarily occurs within the noun phrase of its antecedent, following and modifying the antecedent directly, e.g., *I **myself** did it.* See **REFLEXIVE PRONOUN**.

INTERACTIONAL FORCE: the function of a sentence in a discourse to make assertions, ask questions, issue orders, etc.

INTERJECTION: a word, often not grammatically integrated with a sentence, that expresses the emotions, etc., of the speaker, e.g., *Ouch!, Wow!*

INTERROGATIVE: in traditional grammar, the mood of a sentence used to ask a question.

MOOD: in traditional grammar, the category indicating whether a sentence makes an assertion, asks a question, issues an order, etc.

NOMINAL CLAUSE (also called **NOUN CLAUSE**): a subordinate clause that functions as subject, object, or complement. See **ADVERBIAL CLAUSE** and **RELATIVE CLAUSE**.

NOMINATIVE: the case associated with the subject function.

NOUN PHRASE: a phrase with a noun as its head word.

NOUN CLAUSE: See **NOMINAL CLAUSE**.

OBJECTIVE CASE: See **ACCUSATIVE CASE**.

PARTICLE: a function word, which, with a verb, constitutes a **PHRASAL VERB**, e.g., *call **up** my sister/call my sister **up***.

PASSIVE: a voice expressed by the form *be* + Ven.

PERFECT: an aspect of a verb phrase, expressed by *have* + Ven.

PERSON: grammatical category distinguishing the speaker (first person), addressee (second person), and entity spoken about (third person).

PHRASAL VERB: an idiomatic unit consisting of a verb and **PARTICLE**

POSSESSIVE CASE: See **GENITIVE CASE**.

POSTPOSITION: a word analogous to a preposition, but appearing after its object NP; appears in Japanese and Old English, but not in modern English.

PREPOSITION STRANDING: ending a clause or sentence with a preposition whose object has been moved.

PREPOSITION: a function word that serves as the head of a prepositional phrase, e.g., *in*, *on*, *with*, *of*.

PREPOSITIONAL PHRASE: phrase consisting of a prepostion and NP.
PROGRESSIVE: an aspect of a verb phrase signaled by *be* + Ving.
QUANTIFIER: words such as *someone*, *something* whose referents are often vague. See **INDEFINITNESS**.
REFERRING NOUN PHRASE: a NP that denotes a particular entity or set of entities. See **ATTRIBUTIVE NOUN PHRASE**.
REFERENCE: the entities, qualities, situations, or events identified by (the use of) linguistic expressions.
REFLEXIVE PRONOUN: a pronoun ending in *-self* or *-selves* that functions as the head of a NP, e.g., *I hurt **myself***. See **INTENSIVE PRONOUN**.
RELATIVE CLAUSE: a subordinate clause that modifies a head noun; often introduced by a wh-word or *that*.
RELATIVE PRONOUN: in traditional grammar, a wh-word or *that* introducing a relative clause.
SPECIFIC: property of articles whereby they designate particular members of a class. See **GENERIC**.
STRUCTURE WORD: See **FUNCTION WORDS**.
SUBJUNCTIVE: in traditional grammar, the mood of a sentence used to indicate wishes, contrary-to-fact conditions, probability, possibility, etc.
SUBORDINATING ADVERBIAL CONJUNCTION (SAC): conjunction such as *when*, *if*, *because*, etc. that introduces a subordinate adverbial clause.
SUBORDINATING CONJUNCTION: a function word such as *if*, *when*, *because*, *that*, *who*, etc., that connects two clauses, making one of secondary grammatical status, specifically a modifier or a complement.
TRUNCATED PASSIVE: a passive sentence without a *by*-phrase.
WH-QUESTION: a question beginning with a **WH-WORD** that asks for more information than just yes or no. See **INFORMATION QUESTION**, **YES-NO QUESTION**.
WH-WORD: a function word such as *who*, *why*, *which* that introduces questions, relative clauses, and nominal clauses.
YES-NO QUESTION: a question that can be appropriately answered with yes or no. See **INFORMATION QUESTION**, **WH-QUESTION**.

8 Word Meaning

KEY CONCEPTS
Dictionary entries
Sense relations
Models of word meaning
Mental dictionaries

INTRODUCTION

In this chapter we discuss word meaning. While it's uncontroversial that words mean, it is far from clear how they mean, or indeed what meaning is. Because dictionaries are so familiar, we begin our discussion from the point of view of dictionary entries, which are designed primarily to describe the meanings of words, though they do much else besides. We discuss two approaches to modeling word meaning, and then move to a discussion of the meanings of words as they might be stored in human minds and of the ways in which book and mental dictionaries are alike and different.

We would be surprised if anyone reading this book had never consulted a dictionary; however, our experience over several decades of teaching about language is that very few people read the introductions (front matter) of dictionaries they may have had for many years. Indeed, our experience strongly suggests that most people believe in the myth of "*The* Dictionary," a unique, authoritative, and accurate source of information on words, their spellings, meanings, and histories, of which actual dictionaries are merely longer or shorter versions.

Everyone, especially teachers, should be aware that dictionaries are not all cut from the same cloth. Rather, they differ in substantial ways, which their users ignore at the cost of misinterpreting what they read. The goals of the exercise just below are to raise your awareness of the differences among dictionaries, to show you that it is essential to adopt as critical a stance toward dictionaries as you would toward any other commercial product, and to encourage you to examine dictionaries carefully as you buy them for yourselves, have them bought for your schools, or recommend them to your students.

More generally, teachers and students should have some appreciation of the complexity of issues regarding linguistic meaning, a topic that has challenged western thinking for over two and a half millennia. We have included several items in our References and Resources to this chapter that we hope will help develop that appreciation. The chapter will give you a basic vocabulary for use in conceptualizing and discussing meaning, as well as concepts

to augment our discussion of morphology and parts of speech.

DICTIONARY ENTRIES

Dictionaries are probably the sources of information on words you are most familiar with, so we begin our discussion of words by exploring the information dictionaries provide and the ways in which they present it.

Exercise

1. Just to see how much you may have been taking for granted, and how much of that was right and how much was mistaken, write a 6-7 page critical review comparing/contrasting two reasonably substantial dictionaries (i.e., compact, collegiate or larger; pocket dictionaries are too small) suitable for your purposes, e.g., for your own personal or professional uses or to recommend to the kinds of students you may teach. We think you will learn a lot about dictionaries by comparing/contrasting a learner's dictionary with one for native English speakers. Make sure to give their full names, editions, publishers, dates of publication, and sizes. Indicate the size of the dictionaries by number of pages or entries. Your instructor should approve your choice of dictionaries before you begin. As this is to be a critical review, you should clearly articulate for yourself and your readers the criteria you use to evaluate the dictionaries.

Compare/contrast their front matters (i.e., everything from the front cover to the beginning of the alphabetical listing of words) and their back matters (i.e., everything from the end of the alphabetical listings to the inside back cover). Pay particular attention to:

a. the dictionaries' range of contents (e.g., illustrations, proper names, maps, etc.);
b. the information included in the entries (e.g., pronunciation [what systems are used to describe it, e.g., IPA or some other system?], syllabication [what is meant by this in the dictionaries?], etymology, part(s) and subcategories of speech [what range of these is used in the dictionaries?], definitions, etc.);
c. the ways in which definitions are organized (e.g., earlier to later, most general to most particular, most frequent to least, etc.);
d. the ways in which your dictionaries deal with expressions related to the head word, including derivationally related forms, compounds, phrases, idioms, homographs, etc.;
e. the ways in which your dictionaries deal with controversial usage

issues (e.g., the use of *hopefully* as a sentence adverb or the modification of *unique*);

f. (for learners' dictionaries) the defining vocabulary, if a special one is used;
g. (for learners' dictionaries) the grammatical information included and how it is presented;
h. who the publishers say the dictionaries are designed for. Discuss the ways in which the dictionaries are or are not appropriate for your purposes (e.g., for students you might imagine yourself teaching);
i. the databases on which the dictionaries are based (e.g., are they based on large, computerized, collections of texts? What kinds of texts are included?).

Illustrate your review with appropriate examples from the dictionaries. A very useful source of information and ideas on both native speaker and learner dictionaries is Howard Jackson's *Words and their Meanings,* but there are many more books on lexicography worth reading for this project.

2. Imagine a class of students that you might reasonably expect to teach. What criteria would you use to select a dictionary for the classroom? To ask students to buy for themselves? For yourself?

Dictionaries are designed to provide readily accessible information about the words of one or more languages. Many dictionaries provide far more information than that. They may include lists of colleges and universities, US presidents, the US constitution, and the like. While they may expand their domains in certain respects, they may narrow them in others. Some dictionaries are designed for college students and include words that the editors believe are most relevant to that market segment (and we must never forget that dictionaries are commercial products and that there is no such thing as *The Dictionary*); other dictionaries are devoted to slang; still others to technical fields such as medicine or linguistics (useful ones to complement this book would be Crystal's *A Dictionary of Linguistics and Phonetics*, Matthews' *Concise Oxford Dictionary of Linguistics*, and Johnson and Johnson's *Encyclopedic Dictionary of Applied Linguistics*).

Other dictionaries are for people learning English (or some other language) as a second or foreign language, like the *Cambridge International Dictionary* (CIDE), Random House *English Learner's Dictionary*, and Harp-

er Collins *Beginners ESL Dictionary*/Collins CoBuild *New Student's Dictionary*, Longman *Dictionary of Contemporary English* (also available online), and the American Heritage *Dictionary for Learners of English*. Many learner's dictionaries provide simplified definitions, often by using a limited "defining vocabulary" of about 2,000 of the most frequently used English words. They also typically provide considerably more grammatical information and examples of the uses of the words than dictionaries prepared for native speakers. For example, in addition to the grammatical information provided in its entries, the HarperCollins *Beginner's ESL Dictionary* provides a very useful 220 page synoptic "English grammar guide." Bilingual dictionaries provide definitions in one language for words in another.

To make our discussion concrete and specific we will make use of the following entry from *The American Heritage Dictionary of the English Language* (AHD) (Fourth Edition).

> **jeal·ous** (jĕl´əs) *adj.* **1.** Fearful or wary of being supplanted; apprehensive of losing affection or position. **2a.** Resentful or bitter in rivalry; envious: *jealous of the success of others*. **b.** Inclined to suspect rivalry. **3.** Having to do with or arising from feelings of envy, apprehension, or bitterness: *jealous thoughts*. **4.** Vigilant in guarding something: *We are jealous of our good name*. **5.** Intolerant of disloyalty or infidelity; autocratic: *a jealous God*. [Middle English *jelous*, from Old French *gelos*, jealous, zealous, from Vulgar Latin **zēlōsus*, from Late Latin *zēlus*, zeal. See ZEAL]—**jeal´ous·ly** *adv.*—**jeal´ous·ness** *n.*

Dictionaries differ in the categories of information they include in their entries and in the ways in which they organize that information. Editors try to chose the most readable presentation for each entry. But practices vary, and teachers should be aware of the variations and choose appropriate dictionaries for themselves and their students.

Entry and entry-word

The entire paragraph quoted above is called an **entry**; the first (bolded) word of the entry is its **head-** or **entry-word**. Ordinary dictionaries facilitate finding information about the headwords by arranging them alphabetically.

Exercise

What advantages and disadvantages might come from arranging the entries of a dictionary alphabetically?

A typical native speaker dictionary provides substantial information in each entry. In the entry above, the conventional **spelling** is given by the entry word; if there had been another well-accepted spelling, it would have been included after the entry word. The spelling includes **syllabication** information, in this dictionary by means of a raised dot in the entry word. Syllabication in the entry word tells writers where they may hyphenate the word at the end of a line of type; it is only indirectly related to pronunciation and is becoming irrelevant as we rely on the justification programs in our word processors to space letters for us.

Pronunciation

The **pronunciation** of the word is given in parentheses after the headword. AHD uses a mix of ordinary English letters, letters with diacritics, joined letters (**ligatures**), and one letter, *ə*, from the International Phonetic Alphabet (IPA). The sound value of each letter in the pronunciation guide is indicated by reference to an English word. This kind of system works if you know how to pronounce the reference words as the lexicographers expect, but if you don't know how that word is pronounced, or if you pronounce it in an unusual way (for example, according to a non-standard dialect), then the dictionary's pronunciation guide may be quite misleading. AHD, like many dictionaries, repeats the list of reference words on each second page.

Syllabication (or **syllabification**) in the pronunciation section separates the word into its component spoken syllables and typically also indicates stress. AHD inserts a hyphen or stress mark between each syllable in the pronunciation and marks the syllable with the main stress by a following ´. For example, the most usual pronunciation of *Mongolia* is given as (mŏng-gō´-lē-ə, . . .).

Learners' dictionaries typically use IPA symbols to indicate pronunciation. These symbols have fixed sound values, independent of anyone's native language, dialect, or idiosyncrasies, so they avoid some of the problems associated with native speaker dictionary pronunciation guides. However, if, like most American students, you don't know the sound values of the IPA symbols, they are quite unhelpful. It is important to understand your dictionary's way of indicating pronunciation, and perhaps to learn a relevant set of the IPA symbols.

Parts of speech

After the pronunciation comes the headword's **part of speech**. AHD uses the nine traditional parts of speech: adjective, adverb, article, conjunction, interjection, noun, preposition, pronoun, and verb. It distinguishes definite and indefinite articles and transitive, intransitive, and auxiliary verbs. It also marks some singular and plural nouns and lists prefixes and suffixes. Some dictionaries may use terms that are unfamiliar to you, such as the Oxford English Dictionary's (OED) *substantive* (abbreviated *sb.*). OED is also unusually fine-grained as it designates nouns as either of action or of agent (*n. of action/agent*).

Many entry words belong to several different parts of speech, and different dictionaries have different ways of handling this. Some include them all in a single entry, called a **combined entry** by AHD. Others give a separate entry to each different part of speech that the word belongs to, essentially treating each different part of speech associated with a spelling as a homograph (see below).

Learners' dictionaries tend to give more grammatical information than native speaker dictionaries. They try to provide the grammatical information that is particularly helpful for learners. English learners tend to have difficulty with the count/non-count distinction in English nouns, so for each noun, CIDE indicates whether it is count [C] or non-count [U]. Similarly, while most adjectives may occur before the noun they modify as well as in the predicate of a subject complement clause such as *Frederika is very tall*, some adjectives may occur only before their nouns (e.g., *former*, *live*) and some only in the predicate (e.g., *aghast*, *alive*, *asleep*, *awake*). Generally native speaker dictionaries, such as Webster's New World Dictionary (WNWD), do not provide this information, but learners' dictionaries typically do. CIDE uses [before n] for the former and [after n] (somewhat misleadingly) for the latter. WNWD merely provides a very few illustrative examples of the predicative use, which, of course, do not tell a reader whether he or she may use the adjective before a noun.

Run-ons

Dictionaries also differ in how they deal with words and other expressions that are related to the headword. AHD adds the adverb and noun forms at the end of the entry for *jealous* because their meanings are straightforwardly inferable from the headword's meaning and their forms. However, if the meanings of the derived words are not readily predictable from the meaning of the entry word and the derivation, then the derived word may get its own entry. For example, AHD separates *hereditarian* from *hereditary*.

Dictionary practices are not always consistent. While AHD lists *retaliation*, *retaliative*, *retaliatory*, and *retaliator* as **run-ons** at the end of the entry for *retaliate*, it gives *retrench* and *retrenchment* separate entries, even though the meanings of the latter are readily derivable from those of the former. Check your dictionary for its policies.

Etymology/word history

After the definitions of the word, AHD provides a brief sketch of the history or **etymology** (not *entomology*) of the word. In this case, modern English *jealousy* is descended from Middle English *jelous*, which was borrowed from the Old French word *gelos*, which in turn came from Vulgar (i.e., ordinary spoken) Latin **zēlōsus* (* indicates that the form does not occur in any manuscript but has been reconstructed according to generally accepted linguistic principles of language change), which descended from Late Latin *zēlus*. (Many dictionaries abbreviate the names of languages and historical stages of languages; check your dictionary's list of abbreviations for expressions like ML and ME.) AHD is unusually helpful in providing for many words a paragraph-length ***Word History*** separate from the etymological sketch within the entry.

Typically, learners' dictionaries do not include etymological information, though some language teachers believe that such information can be useful.

Usage

Usage is the study of the ways in which expressions of a language are used by the speakers of that language, especially in formal speaking and writing. Linguists view usage descriptively, that is, they study how expressions are actually used. Others adopt a prescriptive approach to usage, that is, they seek to impose rules of correctness based on criteria other than the practices of the users of the language. English dictionary users expect guidance on how expressions are (or should be) used, especially when usages are controversial. And indeed, many dictionary editors see it as their duty to provide authoritative advice on the usage of the headwords or of particular senses. For many words whose usage is controversial, AHD provides a very useful, critical, paragraph-length ***Usage Note***, based on comments by its usage panel leavened by the linguistic expertise of its Usage Consultant, Geoffrey Nunberg.

Other dictionaries use other devices to provide usage information. Typical is Webster's New World Dictionary's use of short **Usage Labels**. For example, WNWD attaches the rubric [Now Rare] to its version of AHD's sense 5 of *jealous*. As dictionaries differ on whether they include usage advice as such, as well as on the number of usage labels and their meanings,

their readers are best advised to read their front matters.

Some dictionaries embed usage information as though it were grammatical information. A dictionary that ignores or treats a controversial usage issue as a straightforward grammatical one misinforms its readers. For example, CIDE says that *unique* is grammatically [*not gradable*], "being the only existing one of its type . . ." According to this grammatical categorization, expressions such as *almost unique* and *very unique* should be ungrammatical, though they are widely used by native English speakers, including highly educated ones. This puts the grammatical horse before the usage cart. Languages change, and one way in which they change is by extending the range of ways in which words may be used, for instance by broadening the scope of a non-gradable adjective by allowing it to be modified. *Unique* is only a non-gradable adjective if speakers of English treat it consistently that way. But they don't, and no dictionary can put that genie back in its bottle. What CIDE ought to have done was alert its users to the fact that under some circumstances, some people will object to modified *unique*. What it actually does, somewhat contradictorily, is add "more generally, unusual or special in some way." Note that *unusual* and *special* are gradable adjectives. It is best to read the front matter to find out what your lexicographers have been up to, though they are not always consistent. You might compare the CIDE entry for *unique* with that in AHD, especially its Usage Note for that word.

Exercise

Check your dictionary for how it deals with usage issues, and then check *unique, hopefully, infer, irregardless*. Compare your dictionary's approach with the AHD's Usage Notes on each of these; you might also consult a usage dictionary such as the *Harper Dictionary of Contemporary Usage* (Morris and Morris 1985) to see what it says about these words.

Dictionaries tend to lump several different linguistic categories together under Usage Labels. WNWD usage labels include a word's frequency of use (archaic, obsolete, rare), its level of formality (colloquial, slang), its field (poetic), and its region (dialect, British, Canadian).

Lexical fields

Words may have different (though related) meanings in different **fields**; that is, in different topics, disciplines, work and play domains, and the like. For

example, the word *morphology* is used in linguistics, biology, and various other sciences. Dictionaries have a variety of ways of dealing with field information. The following partial entry from *Webster's New Twentieth Century Dictionary Unabridged* (2nd Edition) (WNTC) illustrates how editors may use the separation of senses to separate fields by embedding the field name (bolded) in the definition.

> **mor·phol′o·gy . . .**
> 1. the branch of **biology** that deals with the form and structure of animals and plants, without regard to function.
> 2. the branch of **linguistics** that deals with the internal structure and forms of words: with syntax, it forms a basic division of grammar.
> 3. any **scientific** study of forms and structure, as in physical geography, etc.
> 4. (a) form and structure, as of an organism, regarded as a whole; (b) morphological features collectively, as of a language. (WNTC: 1170; emphasis added)

Other dictionaries, such as WNWD, use italicized labels like *Chem.* that precede the definition:

> **bi·na·ry . . . 4.** *Chem*. composed of two elements or radicals, or of one element and one radical (WNWD: 141)

Cross referencing

To indicate the relations that words develop, maintain, and break off with other words, dictionaries **cross-reference** words in various ways. WNWD uses "see," "also," *same as*, and several other expressions for this purpose.

> **au·to·mat·ic . . .** ***SYN*** see SPONTANEOUS (WNWD: 95)
> **coffee klatch** (or **klatsch**) *same as* KAFFEEKLATSCH (WNWD: 275)

Inflections

All dictionaries provide some information about the **inflections** of major parts of speech, generally only those that are irregular either in spelling or in pronunciation (though some dictionaries, including AHD and *Webster's*, provide all verb inflections). The inflections are typically abbreviated by omitting the unchanged part of the word, for example:

a·lum·na . . . *n., pl.* **-nae**
a·lum·nus . . . *n., pl.* **-ni** (WNWD p. 41)
ser·aph . . . *n., pl.* **-aphs**, **-aphim** (WNWD p. 1299)

AHD lists verb inflections in the following order: past tense (-ed form), past participle (-en form), present participle (-ing form), and third person, singular, present tense (-s form). Where individual inflected forms would occur at some distance from the main entry in the alphabetical listing, they may be cross referenced to it, as in WNWD:

sang . . . *alt. pt. of* SING (WNWD p. 1261)
sing . . . **sang** or now rarely **sung**, **sung**, **sing'ing** (WNWD p. 1329)
sung . . . *pp. & rare pt. of* SING (WNWD p. 1427)

Senses

Senses are the definitions associated with the entry word. In AHD, they follow the part of speech label. In WNWD, they follow the etymology. Definitions are the lexicographers' attempts to represent the meanings associated with the head word. These are typically given in words, though there are pictorial dictionaries for children and many dictionaries include illustrations of various sorts. The definitions given for a word in one dictionary are likely to be very similar to the definitions given for that word in other dictionaries. This is because modern English dictionaries are representatives of a lexicographical tradition that is many centuries old; it is also because crafting definitions within the conventions imposed by that tradition is constraining and difficult, and because lexicographers look to see how their competitors have crafted their definitions. We will look at some of the devices lexicographers use to craft definitions below.

If every form were associated with only a single meaning, and if every different meaning were associated with only a single form, then the lexicographer's task would be considerably simplified, although dictionaries might be rather larger than they are now. However, as our examples have shown (and as a quick flick through a dictionary will confirm), many, if not most, entry words are associated with multiple meanings. Given that, lexicographers have to decide on the best strategy to represent the form-meaning connection. Should there be one entry with lots of senses? Or should there be multiple entries whose headwords are spelled identically but whose meanings differ?

Lexicographers have developed strategies for dealing with such situations. Generally, if the meanings associated with a single spelling are his-

torically descended from the same earlier form, and are clearly closely related to each other, then they will be grouped under a single headword. Such a headword is **polysemous**. *Morphology* is presented as a polysemous word in AHD, WNWD, and WNTC, though not in CIDE.

Once dictionaries allow polysemous entries, the editors have to decide on how to order the senses in an entry. Webster's groups them so that the most similar are presented together under the same number, separated if necessary by letters. As most words have more than a single meaning, most entries will be organized in this way.

> **read**[1] . . . **1.** *a*) to get the meaning of (something written, printed, embossed, etc.) by using the eyes, or for Braille, the finger tips, to interpret its characters or signs *b*) *clipped form of* PROOFREAD (WNWD p. 1181)

> **par·a·site** . . . **1.** a person, as in ancient Greece, who flattered and amused his host in return for free meals **2.** a person who lives at the expense of another or others without making any useful contribution or return; hanger-on **3.** *Biol.* a plant or animal that lives on or in an organism of another species from which it derives sustenance or protection without benefiting the host and usually doing harm. (WNWD p.1031)

Dictionaries differ in the principles they use to order the senses in an entry. WNWD uses a mix of historical and logical ordering:

> The senses of an entry have, wherever possible, been arranged in semantic order from the etymology to the most recent sense so that there is a logical, progressive flow showing the development of the word and the relationship of its senses to one another. (p. xii)

This principle is clearly evidenced by the entry for *parasite* above. The first sense is the original and the others derive from that both logically and historically.

AHD orders senses "with the central and often the most commonly sought meaning first."

CIDE gives each separate set of closely related senses its own entry and labels each entry with a GUIDE WORD chosen to help the user home in on the entry s/he wants:

> **oc·cu·py** . . . FILL
> **oc·cu·py** . . . TAKE CONTROL (CIDE p. 973)

Dictionaries may provide separate, cross-referenced entries for separate spellings of words, even where the meanings are identical. Usually only one head word will be provided with a full entry. For example, WNWD has the entries **je·had** and **ji·had**, but the entry for **je·had** has a *same as* cross reference to **ji·had**, where the full entry is given.

If both spellings and meanings have diverged, then alphabetization will separate the entries, and any cross reference may be in the historical section of the entry. *Flower* and *flour* were both spelled *flour* earlier in English, and both derive from Latin *flor-* ("flower"). *Flower* means the blossom and seed-producing parts of plants, but *flour* has specialized and now means the ground "flower," or best part of a grain, mainly of wheat. The separate spellings usefully separate the meanings for us. Note, however, that *flower* and *flour* are pronounced identically, so they are **homo*phones***.

If a single spelling has two or more quite unrelated meanings, then lexicographers will typically assign a separate entry for each (set of) unrelated meaning(s). WNWD distinguishes **homo*graphs*** by superscript numerals:

dam[1]**. . . 1.** a barrier built to hold back flowing water
dam[2]**. . . 1.** the female parent of any four-legged animal (WNWD p. 356)

Both homophones and homographs may be grouped together under the term **homo*nym***.

Sense relations

So far we have looked at the overall organization of entries. Let's now look at how the meanings of words are expressed.

If the dictionary is not a bilingual one, then the definitions are expressed in the same language as the headword, so there is a built-in circularity. For example, the first sense of **salt** in WNWD is "sodium chloride," (p. 1257) and the definition WNWD gives for **sodium chloride** is "common salt" (p. 1352).

If you don't know the words used in the definition, you can't figure out the meaning of the headword. English learners' dictionaries attempt to deal with this problem by using a defining vocabulary of words they assume to be known to all or most high-beginner or intermediate learners of the language, often the 2,000 most frequently used words of the language. CIDE uses several criteria besides frequency in choosing words for its defining vocabulary: the words must have the same meaning in both US and British English, be easy for learners to understand, be up-to-date, not be easily confused with other English words, not be easily confused with foreign words, and be useful

for explaining other words (CIDE p. 1702).

Exercise

Discuss the defining vocabularies of at least two other learners' dictionaries.

Native speaker dictionaries assume that their users have a much larger vocabulary, although the fact that modern dictionaries typically include even the most basic words means that they must define these words in less basic terms. For example:

> **hole . . . 1.** a hollow or hollowed-out place; cavity; specif., *a*) an excavation or pit . . . (WNWD p. 668)

If possible, a single word equivalent, that is, a **synonym**, may be used:

> **to boot** besides (WNWD p. 163)
> **apteryx . . .** *same as* KIWI (WNWD p. 69)
> **agree . . . 1**. to consent or accede (WNWD p. 27)

Synonymy is usually defined as words that have the same meaning, though it is very unlikely that any two words will have exactly the same meaning. In her lively and lucid study *Words in the Mind*, Jean Aitchison (2003, 3rd ed.) observes that we tend to *pursue* something desirable (e.g., knowledge, a career) but *chase* things such as runaway horses (p. 94). For some speakers, chasing evokes the notion of speed, while pursuing does not necessarily do so. Synonyms thus have to be thought of as two "circles of meaning" that overlap to a greater or lesser extent.

Partial synonymy is much more common than full synonymy. Typically, synonyms are distinguished by subtle meaning differences that challenge lexicographers, linguists, and second language learners, though generally not native speakers. Usage labels may help to distinguish among partial synonyms: words may differ in style (*to stick to something* is neutral, *to cleave to something* is poetic), or in the places where they are typically used (*elevator* is US usage, *lift* is British).

Exercise

The following sets of words are partial synonyms. Identify how they are similar and how they differ: *car-automobile; silver-argent; crux-cross; disconcert-rattle; truck-lorry; soda-pop-soft drink; cat-kitty; make-fabricate; facile-skillful; irritate-annoy-aggravate; woodchuck-groundhog; buy-purchase*. Putting the words in sentences will help you distinguish among them. So will consulting a good dictionary.

WNWD and WNTC provide lists of synonyms distinguished by comments after the main body of the entry. After the synonyms, they provide lists of antonyms. **Antonyms** are traditionally defined as words with opposite meanings, such as *up* and *down*, *good* and *bad*, and the like, though they must share some important aspect of their meanings. For instance, *large* and *small* share the notion of size. However, *apple* and *eraser* are not antonyms because they share little, if any, meaning aside from "physical object." We distinguish several types of antonym (Cruse, 1986, 2001).

Complementary antonyms are pairs of words such that if one word applies the other cannot, for example, *alive* and *dead*. If a person is alive, he or she cannot be dead, and vice versa. Other examples are *hit-miss*, *pass-fail*, *open-closed*.

Gradable antonyms denote opposing positions on some scale; for example, *hot* and *cold* indicate opposite positions on a temperature scale. Because scales are continuous phenomena, we can indicate varying positions on them by modifying the words, e.g., *hotter*, *hottest*, *awfully hot*, *miserably cold*. The values between and beyond the antonyms may also be lexicalized. In between *hot* and *cold* we have *warm*, *tepid*, *cool*, and beyond *hot* and *cold* there is *burning*, *scalding*, and *freezing*, among others. Other gradable pairs include *tall-short*, *wide-narrow*, *big-small*, *strong-weak*, *heavy-light*, *high-low*.

You probably noticed that the members of these pairs are not entirely parallel; one seems to be more basic, or **unmarked**, than the other. We use the basic, unmarked form to ask questions when we have no specific expectation that the marked form describes the situation, i.e., when the question is not loaded toward the marked form. For example, ordinarily if we want to know how strong someone is we simply ask *How strong is he or she?* If, however, we assume that this person is weaker than some norm, then we use the marked member of the word pair: *How weak is he or she?* (The marked/unmarked distinction is important in certain literary theories; see Barthes' *S/Z*.)

You probably also noticed that the scales we use depend on what we're

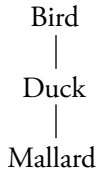
measuring; for instance, a small pumpkin is very likely to be much larger than a big pea.

Non-gradable antonyms cannot be modified, often because they denote absolute differences; e.g., *metabolic* is non-gradable: it does not accept the comparative or the superlative or modification by degree adverb or intensifier (* *more metabolic*, **most metabolic*, **excessively metabolic*, **very metabolic*). Other non-gradables include *absolute*, *sonic, utter*.

Reversive antonyms are words that represent movement in opposite directions, such as *advance-retreat*, *go (away)-come (back)*, *ascend-descend*, *rise-fall*, *go-return*, *fill-empty*, *open-close*.

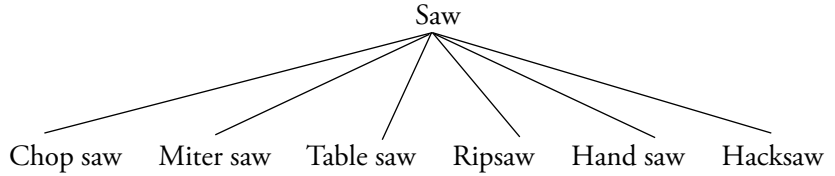
Conversive antonyms represent the same situation from two points of view. For example, if the cat is *higher* than the bird, then the bird is *lower* than the cat. The vertical relationship between the bird and the cat can be viewed from two points of view: *lower than* and *higher than*. Another example is *wife-husband*: if Tarzan is Jane's husband, then Jane is Tarzan's wife. Other examples include *buy-sell*, *give-receive*, *own-belong to*, *above-below*.

While synonyms and antonyms are words at the same semantic level, word meanings may also be hierarchically related to each other. For example, a mallard is *a kind of* duck which is *a kind of* bird. We can represent this relation as a tree:



The meaning "bird" is included in the meaning "duck," which in turn is included in the meaning "mallard." Or from the bottom up: the meaning "mallard" includes the meaning "duck," which includes the meaning "bird." This relationship is called **hyponymy**. The lower terms are the **hyponyms** of the higher terms, which are the **superordinates** or **hypernyms** of the lower terms. Similarly, the meaning of *rose* includes the meaning of *flower*. Consequently, if something is a rose then it must also be a flower. Conversely, the set of things we call roses is included in the set of things we call flowers.

A superordinate term may have many subordinate terms, called **co-hyponyms** or **coordinates**:



In this instance, the meaning and the form *saw* occur in each of the hyponyms, which, in spite of their spellings, are all compound words. We must mention here that not all groups of words that could be regarded as constituting a set of coordinates have a lexical superordinate. As far as we know, there is no single term that encompasses doors and windows, even though these are openings in walls for light, air, people, and refrigerators to pass through.

Dictionaries make extensive use of hyponymy to define words. For instance, WNTC defines *orator* as "a **person** who delivers an oration." (p. 1257) and an *oration* as "an elaborate **speech** or discourse . . ." (p. 1257). So an orator is a kind of person and an oration is a kind of speech. The remaining parts of the definition tell us what kind of person an orator is and what kind of speech an oration is, as well as how orators are distinct from other kinds of persons, and orations from other kinds of speeches.

Dictionaries also make use of part/whole and part/part relationships to define words. There are several types of these. When these relationships apply to unified objects, they are called **partonymy**, or less transparently, **meronymy**. For example, the *covers* and *pages* are parts of *books*; the *engine*, *trunk*, *carburetor*, and *fan belt* are parts of *cars*. The *crankshaft* is a part of the *engine* of a *car*. WNWD defines **cap·i·tal**[2] as "the top **part** of a column or pilaster" (p. 210). Meronymic relationships apply not only to physical objects but extend to temporal relationships (*day*/*week*), events (*inning*/*baseball game*), and even to quite abstract entities (*self-control*/*maturity*).

Because hyponymy and partonymy differ in the semantics of the relationships—*kind of* vs. *part of*—they differ in how lower order terms relate to superordinates of superordinates. In hyponymy, the lower order term is a kind of its superordinate and of its superordinate's superordinate; for instance, a *standard poodle* is a kind of *poodle*, and a *poodle* is a kind of *dog*. But a *standard poodle* is also a kind of *dog*. On the other hand, a lower order term in a partonymy may or may not be a part of the superordinate; for instance, a *page* is a part of a *book* and a *book* may be part of a *library*, but it would certainly be odd to claim that a *page* is part of a *library*.

Other part/whole relations refer not to parts and wholes of unified ob-

jects but to entities associated with each other in a situation. **Metonymy** is the basis for many shifts of meaning. It involves the use of an expression denoting one person or thing to refer to someone or something associated with it. The use of a restaurant customer's order to refer to the customer is a very productive source of metonymy. For instance, a waiter might say, *The fishburger wants more French fries*, to identify a particular customer and their request. The use of personal names to refer to events that the individual named is responsible for is also productive: *Bush invaded Iraq*. Metonymy is occasionally the basis for permanent shifts of meaning; look up *bead* in a comprehensive dictionary with etymological information such as AHD.

Metaphor is yet another relationship among words. It is based on perceived similarities between entities, and word meanings are often extended to denote entities similar in some ways to the ones more typically denoted by the word. Many metaphors are based on body parts; for example, AHD (p. 807) includes in its meanings for *head* the head of a boil, the head of a tool such as a hammer, a head of cabbage, the head of a group, the head of a phrase, and lots of others, all metaphorically derived from the central meaning of *head*, namely that mass of bone and brain that sits atop your neck. *Mouth* and *foot* also have multiple metaphoric meanings, which your dictionary should list.

Because metaphorical senses are extensions of the basic senses of words, they develop historically later than them. Some extensions may be haphazard; for instance, we do not think of the nose of a river or a bottle. But there may be some general principles in language for metaphorical creation. For instance, English seems to have a principle by which color words may be extended to psychological states: e.g., *blue* (sad), *red* (with anger), *green* (with envy), *yellow* (cowardly), *black* (mood). (See Lakoff and Johnson 1980.)

Exercise

1. Compare and contrast a regular dictionary with a thesaurus, paying particular attention to the ways in which both are organized and the ways in which meanings are represented. What purposes do you think each was designed for?

2. Rhetoricians, literary critics, and others interested in figures of speech (tropes) have distinguished many types and subtypes. Those related to metonymy are particularly interesting. You might investigate synecdoche and antonomasia and discuss their implications for word meaning. Lakoff and Johnson (1980) is a thought-provoking discussion

of figures of speech, especially of metaphor.

How do we know words have meaning?

By posing this question, we do not intend to cast doubt on the proposition that words have meanings. Rather, we want to spell out some good reasons to believe it. In our chapter on Concepts of Language, we observed that our linguistic competence allows us to do many things. (Recall that competence is unconscious linguistic knowledge, which includes knowledge of the meanings of words; examples such as the ones below tell us only that such knowledge must exist, not what it actually is.) Our competence enables us to distinguish between well- and ill-formed strings of words and to detect grammatical structure. Crucially for our current discussion, it enables us to detect meaning relations among expressions, including, whether an expression has a coherent meaning or not (1a), whether expressions paraphrase each other, that is, whether they are synonymous (1b), whether words are related by hyponymy (1c), partonymy (1d), antonymy (1e), whether a word (*fan*) is ambiguous (1f), and whether a word is used metaphorically (1g), as well as all the other meaning relations we identified above. These abilities are strong evidence that word meanings are real and not just figments of linguists' imaginations.

(1) a. Colorless green ideas sleep furiously.
b. groundhog—woodchuck
c. lizard—reptile
d. elbow—arm
e. big—small; above—below; open—closed
f. That fan is very annoying.
g. I'll dig with it.

Sentence (1g) is from Seamus Heaney's poem "Digging." In the minimal context given in (1g), *it* would probably be understood as a spade or some other such implement, and *dig* would be interpreted as turning over soil in a garden or the like. However, in the larger context of the entire poem, *it* refers to a pen in the poet's hand and *dig* must be interpreted metaphorically; consequently, the sentence is ambiguous between a literal and a metaphorical meaning.

Examples such as those in (1) could easily be multiplied, but these few should make clear a simple idea: *linguistic competence includes an unconscious knowledge of the literal meanings of words*. While this conclusion might seem trivial, it conceals several less-than-obvious points. First, it suggests that

speakers carry around in their minds something like a dictionary of their language. However, there is good evidence that speakers' mental dictionaries are quite different from the book dictionaries of a language. For instance, no book dictionary will tell you that the words *idea* and *sleep* cannot literally be combined as subject and predicate. (Linguists often use the terms *lexicon* or *mental lexicon* to refer to this aspect of our linguistic competence and to emphasize its difference from written dictionaries.) In fact, the nature of the mental lexicon is still unclear; we will explore some of its characteristics below.

Second, you should not confuse knowing the meaning of a word with being able to give it a satisfactory definition. Definition-stating is a learned ability and is only marginally necessary in most communication; it is also far beyond the normal capacities of people. The eminent lexicographer Sidney Landau expresses the point simply (by "general definer," he means one versed in common, rather than technical, vocabulary):

> It is difficult to find highly skilled general definers. Such people are about as rare as good poets . . . there are probably fewer than a hundred experienced general definers in the whole of the United States. (Landau 1984: 235)

Exercise

Without consulting a dictionary, state the meaning(s) of the words below:

a. situation
b. pong (as in "ping-pong ball")
c. if
d. of
e. vacillate

What problems did you run into? How did you solve them?

Third, whatever the nature of the mental lexicon, it clearly must show that *words are related to one another*. To put it negatively, words are not just *listed* in our competence, in alphabetical or any other simple order. Rather, they are, as we have seen, interconnected in complex ways. These interconnections determine which words can and cannot occur together in grammatical constructions—e.g., as in (1a). Interconnections relate families of words related by polysemy, synonymy, meronymy, antonymy, and other sense relations.

Some models and explanations of word meaning

Since published dictionaries do not offer a very useful model of our lexical competence, linguists have struggled to present more plausible ones. Besides having to account for the observations noted above, they must also explain the fact that, while the human brain is finite, an individual's vocabulary may be very large. Estimates for an educated person's vocabulary run anywhere from 50,000 to 250,000 words. The largest unabridged dictionaries of English contain well over half a million entries. Clearly, however, no two individual speakers of a language have exactly the same vocabulary. If this is so, how can we hope to describe the vastness and variability of lexical competence? A general solution is to describe not the vocabulary of a single individual or the entire word-hoard of English, but instead to envisage the *general properties* according to which the vocabulary of any individual—or of any language—can be constructed. There are two basic models of lexical structure, the network model and the componential model.

The network model

The **network model** (N-model) posits that semantic competence is to be explained on the assumption that words have certain **primitive semantic relations** with each other. In other words, our semantic competence does not consist of knowing definitions at all, but rather of knowing how words relate to each other. You may recall from your literary theory classes that this is close to the Saussurean/structuralist approach. The primitive relations most commonly explored in the N-model are the ones we've been discussing and are listed and exemplified again in Table 1.

RELATIONSHIP	CHARACTERISTICS	EXAMPLES
Synonymy	extensive overlap in meaning	large/big chase/pursue
Antonymy	oppositeness of meaning along related dimensions	large/small strong/weak
Hyponymy	meaning inclusion	rose/flower
Partonymy/Meronymy	part-whole relationship	keyboard/laptop
Metonymy	co-elements in a situation	writer/book
Metaphor	similarity	foot of person/ foot of bed

TABLE 1. LEXICAL RELATIONS RECOGNIZED IN THE NETWORK-MODEL

Although there are many other lexical relations, these are the most fre-

quently mentioned in the network literature. For further elaboration, see Cruse (1986, 2001).

The network model characterizes not just the semantic relations among separate words, it can also describe the relationships between the senses of individual words. For instance, if you look up the noun *order* in a dictionary, you will find its meanings broken down by numerals and letters to include such different notions as: 1. a condition of arrangement, 2. customary procedure, 3. something requested for purchase, 4. a monastic group, etc. Each one of these senses enters into different network relations with the senses of other words. For instance, sense 1 of *order* would be an antonym of one sense of *disorder*; sense 3 might refer to a whole of which the word *entrée* (in a restaurant) represents a part.

Exercise

1. Using the N model, indicate how each of the following word pairs are related. Write down any difficulties you have in coming to a decision.

a. forward—backward
b. casual—formal
c. car—wheels
d. car—passenger
e. journey (verb)—travel (verb)
f. week—semester
g. freshman—sophomore
h. turkey (fowl)—turkey (undesirable person)
i. brain (body part)—brain (very intelligent person)

2. Using the N model, indicate the semantic relations among the words in each of the groups below. To simplify your work, write the group of words in a circle and draw lines between related words; label each line with one of the network relations. Later, redraw your diagram to show relations clearly.

a. car, truck, locomotive, wheels, trunk, hood, horn, vehicle
b. delay, linger, loiter, procrastinate, hasten, hurry, stampede (all as intransitive verbs)
c. selfish, egocentric, altruistic, giving

The componential model

The **componential model** (C-model) is based on the premise that word

meanings are complex and can be viewed as composed of basic, indivisible units of meaning. These units are usually called **components**, though sometimes you will see them referred to as **features** or **sememes**. Components are often regarded as *pure concepts*, not to be equated with the words of any language, which is why they are typically written in capital letters. From this point of view, a word is essentially a shorthand way of grouping a set of concepts under a single label. Some of the concepts that have been proposed by various linguists as components are listed in Table 2.

ANIMATE (ALIVE)	BECOME	CAUSE
CURVED	FEMALE	FLAT
HORIZONTAL	HUMAN	INGEST
INTENTION	KNOW	MALE
MARRIED	NOT	OLD
PLACE	SELF	SIZE
VERTICAL	YOUNG	

TABLE 2. SOME PROPOSED UNIVERSAL SEMANTIC COMPONENTS

The components listed in Table 2 are just a sample of those that have been proposed, but they are adequate to illustrate the thrust of the C-model. For instance, in this model the word *alive* is shorthand for the component ANIMATE; *dead* is shorthand for NOT, ALIVE; *die* for BECOME, NOT, ALIVE. *Kill* adds the component CAUSE, and *suicide* adds SELF. (The components are independent of the parts of speech of the words to which they apply.)

You might object that such definitions are grossly oversimplified. A valid concern. At the very least, how the components are related to each other is a very important aspect of word meaning. Simplistically adding the components BECOME, NOT, and ALIVE together does not adequately define *die*. These issues raise technicalities which need not detain us here. For ways to deal with them you might read work on this topic, e.g., Ch. 2 of Jackendoff (1995).

It is important to distinguish between the universality of the list of components and their language specific uses. The features mentioned in Table 2 are quite likely to be universal, that is, having the potential to be used in the creation of word meanings in any and all languages. While there may be components that are specific to individual languages, there are linguists who claim to have identified a universal set of semantic primitives. (Anna Wierzbicka probably makes the strongest claim in that regard—see Wierzbicka 1992, for

example; Goddard 1998 is an accessible introduction to that style of doing semantics.)

While linguists may claim that the sets of primitives they propose are universal, no one claims that they are bundled together in the same way in all languages. For instance, while both English and French both make use of the component FEMALE, they use it in different ways. Both languages indicate the female member of certain pairs of words morphologically: *lion*, *lioness*; *lion*, *lionne*. However, the two languages differ in that French has separate (though related) words for MALE and FEMALE cousins (*cousin*, *cousine*); English does not. (For an amusing compilation of words with remarkable meanings see de Boinod 2006.)

We must also distinguish between central and more marginal aspects of a word's meaning. You might argue that *cannibal* suggests primitiveness, warfare, initiation, or absorption of the characteristics of the person devoured. However, these are not *essential* components of the meaning of *cannibal*; a cannibal is still a cannibal even if he is a highly educated rugby player. The marginal aspects of the meaning of *cannibal* can be regarded as its **connotations**. The connotations of words are often variable across speakers of a language and typically express emotional associations. Different words that may be used for the same things may convey different feelings about them; for example, *woman* and *lady* may refer to the same entities, but they convey rather different attitudes toward them.

Exercise

1. (a) Using the components in Table 2 and any others you might need, identify the meaning components shared by the words in each of the sets below and the components that distinguish the members of the sets:

   a. ram, ewe, lamb
   b. boar, sow, piglet
   c. stag, doe, fawn
   d. bull, cow, calf
   e. stallion, mare, foal, filly, colt
   f. man, woman, child, girl, boy

(b) Using the components you identified, characterize the meanings of *ewe, fawn, man, filly.*

2. Examine the words below. Which of the components from Table 2 might the words represent? For each word, identify one component not

in Table 2.

a. bachelor
b. spinster
c. teach
d. skyscraper
e. table
f. thicken

3. Identify words whose meanings are represented by the following combinations of components. If no such word exists in English, indicate that fact. If you know a language besides English, identify words in that language that correspond to the set of components.

a. YOUNG + HUMAN + FEMALE
b. YOUNG + HUMAN + MALE
c. YOUNG + NOT + HUMAN
d. YOUNG + NOT + HUMAN + EQUINE
e. YOUNG + NOT + HUMAN + FELINE
f. NOT + HUMAN + MALE + EQUINE
g. NOT + HUMAN + FEMALE + EQUINE
h. CAUSE + NOT + INGEST

4. Examine your answers to Exercises (1), (2), and (3). What technical problems arose in applying the C model? Consider the use of NOT.

5. Examine your analyses in Exercises (1) and (2). Do you see any cultural bias in your analysis or in the C model in general? If so, what is that bias? How would you go about correcting it within the framework of the C model?

6. Describe the connotational differences among the members of the following sets of words:

a. violin—fiddle
b. careful—scrupulous
c. curious—inquisitive—nosey
d. politician—statesman
e. thin—slender—skinny

So, how effectively does the C-model account for lexical competence? Actually, reasonably well (though we would have to specify how the components

can be combined). First, we can use it to explain why some sentences are semantically anomalous. For example, in sentence (1), *Colorless green ideas sleep furiously*, the head of the subject, *ideas,* has the components NOT + ANIMATE; in contrast, the predicate *sleep* requires that its subject have the component ANIMATE. This shows that in addition to using components to define individual words, we can also use them to specify how words can combine with each other. Such specifications are called **selectional restrictions**; they identify the semantic (literal) limitations on the components of words put together in close grammatical relationships such as subject and predicate, verb and object, head and modifier, etc. Semantic anomaly, in short, will result when selectional restrictions are violated.

Sense relations also can be described in terms of components. Words are synonymous to the extent that they share components. In simple cases, antonyms share all components except perhaps just one; e.g., *alive* and *dead* share the component ANIMATE, although the latter also has the component NOT.

Finally, lexical ambiguity is represented in the C-model by assigning to the same word two different sets of components. Polysemy is explained as having at least one common component and at least one different component. So the various senses of *mouth* will share the component of OPENING and will be distinguished by such components as ANIMATE, SIZE, FLAT, and CURVED.

Exercise

1. Explain the following semantic oddities by noting the selectional restrictions that the sentence violates. Do not hesitate to use components beyond those mentioned in Table 2.

   a. ?Monica elapsed.
   b. ?John accidentally resembled his sister.
   c. ?I lost my dog a grief ago.

2. For each pair of words, indicate which components they share and which components distinguish them. (Again, use components beyond those noted in Table 2 as you need to.)

   a. car—automobile
   b. chase—follow
   c. huge—humongous
   d. building—skyscraper

3. Write down as many meanings as you can think of for each of the following words. (Do not use a dictionary.) Which of the meanings are related and which are not? How can you show this difference using semantic components?

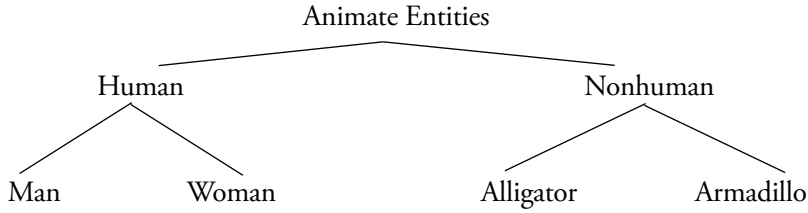
a. ring
b. order (noun)
c. order (verb)
d. of

Relationships between the N-model and the C-model

Which of the two approaches to word meaning is better? One might favor the N-model on the grounds that, when asked for the meaning of a word, people tend to provide synonyms rather than fully specified definitions. As we saw, the ability to state adequate definitions is beyond the capabilities of most speakers; recall Landau's remark above. Psycholinguistic experiments likewise favor the N-model as the more natural. (See Aitchison 2003: Chapters 7 and 8.) On the other hand, there seems to be some overlap between the two approaches: synonymy and antonymy, at least, suggest that two (or more) words share aspects of meaning.

Both approaches fall short of fully describing the meanings of words. The fact that synonyms are rarely if ever perfect poses a challenge to the N-model, and subtle meaning differences require positing ever more semantic components. We encourage you to review work by Goddard, Jackendoff, and Wierzbicka for ways to deal with such problems.

Some problems might be addressed by combining the two approaches, in the form of a "componentially-augmented network," which would draw on the strengths of both approaches. For example, such an augmented network model might allow us to reduce repetition of components in the specifications of related words. For instance, the fact that anything with the component HUMAN is also ANIMATE is a major redundancy that might be represented in people's minds through a taxonomy of animate beings as hyponyms of the superordinate category of animacy. Put diagrammatically:



So, a lower category inherits or includes the characteristics of all the categories above it on the tree. For example, *woman* is *human* and *animate* while *armadillo* is *nonhuman* but *animate* by virtue of their relationships with other words and by virtue of the meaning components associated with those other words. Abbreviatory rules like these are called **redundancy rules**.

Exercise

1. The vast number of lexical items in any language makes it unlikely that a small set of lexical relationships or components will suffice to differentiate all words. For example, we know that *high* and *deep* have a great deal of meaning in common—e.g., vertical measurement—but nonetheless they are semantically distinct, as is shown by the anomalies in (a) and (b):

   a. The river is 50 feet deep/*high.
   b. The mountain is 14,000 feet *deep/high.

High and *deep* and their derivatives are thus not synonyms; the first indicates "measurement to the top"; the second denotes "measurement to the bottom" from some vantage point (Room, 1981, p.62). However unable speakers might be to articulate this difference, the consistency of their semantic judgments in cases such as (a) and (b) indicate that they do know the meanings of these items. Create sentence pairs like (a) and (b) that clearly distinguish between the pairs of words below (from Room) and on the basis of your sentences accurately characterize the meaning differences between the word pairs.

   a. astronomy—astrology
   b. crime—offense
   c. regret—remorse

2. Standard dictionaries (and style manuals) often attempt to distinguish the following word pairs.

   a. infer—imply
   b. include—comprise

Does your dictionary distinguish them? How? Does this distinction match your use of these words and your observations about how they are used?

MENTAL DICTIONARIES

At this point we must ask whether the book dictionaries we are accustomed to are accurate models of the dictionaries we have in our minds/brains, which allow us to perform as speakers of a language. While we know a great

deal about book dictionaries, the research on mind dictionaries is, in comparison, in its infancy.

First, do our mental dictionaries use the same strategy as book dictionaries to allow speedy access to words? Remember that this is accomplished in book dictionaries by alphabetization. We probably have between 50,000 and 250,000 words tucked away in our minds, most of which we can access fairly easily. We can recognize a word in about a fifth of a second (often even before we have heard the entire word), consequently, searching such a large data base requires that it be structured so as to allow rapid searching.

Second, do book dictionaries include all the information about individual words and the relations they enter into that our mental dictionaries include? We saw that hyponymy is the major relation used by book dictionaries to define words. Psycholinguistic research shows that where a superordinate term is well-established, it comes readily to mind in word-search errors and in word-association tasks. However, this research also shows that co-hyponymy/coordination is the most important psychological bond among words. In word-association tests, coordinates are very frequently elicited; in word-selection errors, the wrong word is far more likely to be a coordinate of the intended word than otherwise (Aitchison 2003). How often do we say *left* when we mean *right*, or *up* when we mean *down*?

Exercise

1. List the first five words that come to your mind upon hearing/reading the word *spoon*. For each of these words determine its sense relation to *spoon,* that is, whether it is a coordinate, superordinate, subordinate, and so on. If one of your words bears a relationship to *spoon* that we have not mentioned, try to articulate what that relationship might be. What do these relationships tell you about your mental representation of *spoon?*

2. Keep a list of lexical errors you make. Include both the intended word and the one produced in error. After you've collected 20 or so, identify the semantic relationships between the right and wrong words. Why do you think you made those particular errors and not some possible others? What might these errors tell you about how your mental dictionary is organized? There's a large research literature on this topic. Look in your university library for items on slips of the tongue; look at work on this topic by Victoria Fromkin.

Book dictionaries are designed primarily to support reading and writing. (What are thesauruses designed for?) Mental dictionaries evolved primarily to support speaking and hearing. For instance, when we "have a word on the tip of our tongue," we have most of the word, just not all of it. Besides its meaning, we are likely to have some but not all of its pronunciation, usually a sort of skeleton that may include the number of syllables in it, where the main stress falls, and perhaps its first and last syllables.

The syntactic information in our heads is far richer than the syntactic information in even the most elaborate learner's dictionary, and even in the most comprehensive modern grammar. For example, native speaker book dictionaries typically make a two-way distinction between transitive and intransitive verbs, that is, between those that do and those that do not take a direct object. But some verbs take an indirect object as well as a direct one (e.g., *give*), so the book dictionary fails to make a distinction among verbs that our mental ones make. In fact, even this three-way distinction between intransitive, transitive, and bitransitive verbs barely scratches the surface of what we know about the syntactic frames that verbs fit into. Native speaker book dictionaries generally provide no more information about the **syntactic frame**, or grammatical context, that specific words require. Learner's dictionaries are often far more elaborate in this respect. CIDE, for example, distinguishes among verbs that take an object followed by an adjective or adjectival phrase (e.g., *drive X crazy*), verbs that take an object followed by a noun or noun phrase (e.g., *crown her empress*), and verbs that take an object followed by a noun or adjective phrase (e.g., *consider him incompetent/a quack*), to mention but a few. (See CIDE's front matter discussion of its grammar labels.)

As we saw, book dictionaries make extensive use of hyponymy in their definitions. Remember that saying that one word is a hyponym of another is to say that the referents of the hyponym are a subset of the referents of the superordinate word. Another, more contorted way to say this is to say that the members of the category represented by the hyponym are a subset of the members of the category represented by the superordinate word. At this point we should take a closer look at how categories and words are related and what it means to belong to a category.

We'll make the simplest possible assumption about the relation between words and categories: words name categories—of entities, events, qualities, relationships, and the like. One version of the traditional school definition of "noun" is "a noun is the name of a person, place, thing, or idea." One problem with this is that nouns (except proper nouns), like all other words, name categories of persons, places, things, and ideas, not just individual

ones: *dog* represents all dogs, not just Lassie or Snoopy.

Categories need discussion. Let's imagine that we are in a context in which we are talking about technical matters and that we are expected to be technically correct. A simple example of such a context might be a discussion about plane figures in a geometry course. In such a context, when we use the word *square*, we mean "a plane figure having four equal sides and four right angles" (WNWD p. 1381), no more and no less. The elements of the definition, "plane figure," "four equal sides," and "four right angles," are all **necessary** to define *square* and together they are **sufficient** for its definition. When scholars try to define technical concepts they generally try to define them in terms of necessary and sufficient conditions. If they succeed, then, in principle it is possible to decide for any item whether it is a representative of that category or not. Given our definition of *square*, we can decide for anything whether it is a square or not. The world, however, is not always as rigid as a geometry class.

Imagine now that we have been rescued from the math discussion, and we go to a birthday party where there is a flat layer cake cut into *squares*. If you noticed that the pieces did not meet the mathematical definition, could you reasonably object that the pieces are not really squares? Anyone objecting on those grounds wouldn't deserve any cake. As far as we know, there is no English word for the almost square pieces that a flat cake is cut into, so until someone invents such a word and it is widely accepted, we can use *square* and our audience will **accommodate** us. These kinds of accommodations lead to rampant polysemy in much of the vocabulary. So it is important to remember that polysemy, accommodation, and context are inextricably intertwined.

If words and categories were all defined in necessary and sufficient terms, then categories could be kept clearly distinct, as squares and triangles are in geometry. But if we can bend these definitions, or if we cannot provide necessary and sufficient definitions for categories, then the boundaries between categories may get quite fuzzy. In fact, many natural categories are like this. Where exactly does red end and orange begin? Where do animals end and plants begin? We are unlikely to get unanimous agreement on the answers to such questions. Indeed an article in the June 2008 issue of Scientific American grapples with the problem of defining "species" (Zimmer 2008). Nonetheless, in ordinary, non-technical company, we cut each other some slack by not expecting words always to be used with technical rigidity. We can also indicate when we are using words imprecisely by using **hedges**, such as *like* or *sort of*; or we can indicate that we are being technically correct by including expressions such as *technically—Technically, a phoneme is a*

contrastive sound unit.

Many dictionary definitions are expressed in terms of the **function** that something serves. For example, WNWD defines *hinge* as "a joint or device on which a door, gate, lid, etc. swings" (p. 664). Suppose that no one had oiled the hinge in decades and it could no longer swing—is it still a hinge? The answer is undoubtedly "yes," just as a dog with no tail is still a dog. These may be **defective members** of their categories, but they are still members. How much change must be endured before something is no longer accepted as a member of its original category? What does a dog have to give up before it is no longer a dog? Whatever the answer to that question is, it is clear that we can adjust our assumptions about what it takes to be a member of a category to accommodate defective members.

As we have seen, categories typically have many members, in fact, potentially indefinitely many. The more general categories have multiple subcategories, which in turn may have their own subcategories. However, some category members are viewed as better members of the category than others. For instance, chairs and sofas are regarded as better items of furniture than refrigerators; robins and sparrows are better birds than penguins or ostriches; shirts and skirts are better pieces of clothing than shoes and socks. This layering of category members extends even to things defined in terms of necessary and sufficient conditions, such as prime numbers: for example, 3 is a better prime number than 23, even though both fit the technical definition. It has been argued that categories are structured around a central, most typical member, or **prototype**, e.g., chairs in the case of furniture, robins in the case of birds, and so on.

Exercise

Let's try to determine the prototypical member of a category. As quickly as you can, write out a list of ten vegetables. Then compile the lists of all the students in your class. Order the vegetable names according to their frequency in the lists. Then take the three most frequent words and check how early they occur in the lists. Generally, the most frequent ones will occur early. The earliest and most frequent word probably represents the most prototypical member of the category of vegetables.

Dictionaries indicate certain aspects of prototypicality in their definitions. For example, WNWD (p. 1051) describes a penguin as a "flightless

bird." This negative definition suggests that the typical bird is not flightless; similarly, WNWD describes dodoes (p. 414) as having "rudimentary wings useless for flying" and ostriches (p. 1007) as "having small, useless wings." Presumably prototypical wings are not useless for flying.

Book and mental dictionaries differ also in the amount of information they provide about the **collocational** properties of words. For example, if we leave fat, bacon, butter, or oil sitting around long enough it will become *rancid*, e.g., *rancid bacon*; however, if we leave fruit, vegetables, or eggs sitting, they will become *rotten*, e.g., *rotten apple*. So *rancid* collocates with the words for fatty or oily substances, and *rotten* collocates with words for fruits, vegetables, and the like.

One word collocates with another if they occur together in phrases more frequently than their meanings alone would predict. For example, *green* collocates with *envy*, as in *green with envy*, far more frequently than other color names, for example *blue*. Likewise, *blue* collocates with *face*, as in *blue in the face*, far more frequently than other color names (except perhaps for *red*, as in *red in the face*). So, collocations are relatively predictable co-occurrences of words in phrases. Mental dictionaries include far richer collocational information than book dictionaries do.

The interpretation of a word may depend on what it collocates with. So *dirty* means "unfair" when it collocates with *fight*, but "soiled" when it collocates with *clothes*, and is ambiguous with *hands*.

Exercise

1. What words collocate with *sweet?* How does the meaning of *sweet* change as its collocates change?

2. Think of three other words besides *dirty* and *sweet* and their collocates, and describe how your words change meaning as their collocates change.

We can look at collocation as largely a matter of field. When the polysemous word *morphology* collocates with words like *derivational* and *inflectional*, then we know we are in the field of linguistics and that it is to be interpreted as denoting word-structure. Until recently linguists paid relatively little attention to collocation. But with the development of very large computerized databases of spoken and written language (**corpora**) and the programs to search them (**concordancers**), we can expect collocation to be-

come an important area of research and to provide significant insights into how words and larger expressions are organized in our minds. Book dictionaries are more and more dependent on such databases and will incorporate more collocational information as time goes on.

Collocational expectation is a matter of degree. Some collocational restrictions are quite narrow, others are more liberal. Collocates may become rigidly fixed, in which case they have calcified into **idioms**, expressions whose meanings are not derivable from their words and syntax. Examples include *kick the bucket* for "die," *tie the knot* for "marry." Note that these expressions have both a literal and an idiomatic meaning. The audience has to work out which meaning is intended in a particular context.

It should come as no surprise that because the psychological bonds between collocates may be very strong, words regularly elicit their collocates in word association tests.

Dictionaries differ in how they treat idioms. Some may not include them at all. WNTC and WNWD include idioms at the end of the entry for one or more of the main words of the idiom (*kick the bucket* is listed under *bucket*, though not under *kick*).

Exercise

1. What words collocate with *blond, false, artificial, herd, flock, ream, spick, husband, deal, bumper?* Some of these words allow only one or two collocates; the remainder allow for (far) more. Identify as many collocates as each word allows, up to a maximum of five. Check a pair of dictionaries, including a learner's, to see if and how collocational information is included.

2. Make a list of 10 idioms. What are their meanings? Can all of them be taken both literally and idiomatically? Do your examples suggest any connection between idiom and metaphor? Check a pair of dictionaries, including a learner's, to see if and how idioms are included. If you know some people learning English as a second language, ask them if they understand the idioms you have chosen.

CONCLUDING REMARKS

We saw in this chapter that dictionaries, especially larger, more comprehensive ones, provide enormous amounts of information about the words of a language. We also saw that learner's dictionaries tend to provide more infor-

mation about the grammatical structures associated with individual words than native-speaker dictionaries do. We investigated lexical relations such as synonymy, antonymy, hyponymy, and the like, and the ways in which dictionaries make use of these relations in their definitions. Our discussion of mental dictionaries showed that they are not alphabetically organized, and that for all the information contained in even the most comprehensive dictionary, our mental dictionaries include even more information for each entry. We discovered that word meanings tend to be fuzzy and prototypically organized.

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GLOSSARY

ACCOMMODATION: adjusting our linguistic expectations and practices to specific circumstances.

ANTONYMS: words representing opposing values on some dimension. See **COMPLEMENTARY ANTONYMS**, **CONVERSIVE ANTONYMS**, **GRADABLE ANTONYMS**, **NONGRADABLE ANTONYMS**, **REVERSIVE ANTONYMS**.

CO-HYPONYM: See **COORDINATES**.

COMBINED ENTRY: a dictionary entry that includes all the parts of speech to which the entry word belongs.

COMPLEMENTARY ANTONYMS: pairs of words such that if one applies the other cannot, e.g., *alive*/*dead*.

COMPONENTIAL MODEL (C-model): model of lexical meaning that assumes that word meanings are complex and can be viewed as composed of smaller units of meaning called **SEMANTIC COMPONENTS**, **SEMANTIC FEATURE**, and **SEMEME**.

CONCORDANCER: computer program for doing linguistic analysis on a **CORPUS**.

CONNOTATIONS: aspects of the meanings of words that indicate the speaker's/writer's attitude toward the word's referent(s).

CONVERSIVE ANTONYMS: words that represent a situation from different points of view, e.g., if X is Y's *husband* then Y is X's *wife*.

COORDINATES: expressions that have a common **HYPONYM**, e.g., *phonebook* and *textbook* are coordinates of *book*.

CORPUS/ORA: computerized collections of texts designed to allow computerized linguistic analysis. See **CONCORDANCER**.

CROSS-REFERENCE: notation in dictionaries that directs readers from one entry to another.

DEFECTIVE MEMBERS: members of a category that do not meet one or more of the characteristics typical of members of the category, e.g., flightless birds.

ENTRY: the block of text in a dictionary that includes the **ENTRY WORD** or **HEADWORD** and all the information associated with it.

ENTRY WORD: the highlighted expression at the beginning of a dictionary entry about which the remainder of the entry provides linguistic information.

ETYMOLOGY: the information in a dictionary entry that describes the history of the entry word.

GRADABLE ANTONYMS: words that represent opposing values on a continuous dimension, e.g., *tall*/*short*.

HEADWORD: See **ENTRY WORD**.

HEDGES: expressions that allow communicators to weaken their commitment to the truth of a claim, e.g., ***I believe*** *that Darwin is correct*.

HOMOGRAPHS: two or more separate words with the same spelling but unrelated meanings. See **HOMOPHONES**, **HOMONYMS**.

HOMOPHONES: two or more separate words with the same pronunciation but unrelated meanings. See **HOMOGRAPHS**, **HOMONYMS**.

HOMONYMS: two or more separate words with the same pronunciation or spelling but with two or more unrelated meanings, e.g., *date* meaning type of fruit and arrangement to meet. See **HOMOPHONE**, **HOMOGRAPH**.

HYPERNYM: see **SUPERORDINATE**.

HYPONYM: the less inclusive word in **HYPONYMY**, e.g., *scalpel* is a hyponym of *surgical instrument* because it is a kind of surgical instrument.

HYPONYMY: a **SENSE RELATION** between expressions such that the entities denoted by one expression are included among the entities denoted by another, e.g., *teaspoon*/*spoon*. The relationship can be paraphrased as *X is a kind of Y*, thus a *teaspoon* is a kind of *spoon*. See **COORDINATE**, **HYPERNYM**, **HYPONYM**, **SUPERORDINATE**.

CO-HYPONYM: see **COORDINATE**.

IDIOM: expression whose meaning cannot be determined simply from the meaning of its component words and their syntactic organization, e.g., the proverbial meaning of *Every cloud has a silver lining*.

INFLECTION: markers on words to indicate such grammatical information as tense, person, and number, e.g., the {-s} suffix added to English verbs to indicate third person, singular, present tense.

LEXICAL FIELD: set of expressions in a language having to do with concepts in a single domain, e.g., the set of technical terms in linguistics.

LIGATURE: a letter created by combining two or more characters, e.g., æ.

MARKED: the member of a pair of related expressions that is more complex semantically and/or formally than the other member, e.g., *stallion* is marked in relation to *horse* because the former includes the meaning male, whereas a horse may be either male or female. See **UNMARKED**.

MENTAL DICTIONARY: mental store of words and word-like expressions, including information on their phonological, morphological, syntactic, semantic, discourse, and pragmatic properties. Also called **MENTAL LEXICON** or just **LEXICON**.

MERONYMY: see **PARTONYMY**.

METAPHOR: a figure of speech in which an expression that is typically used to denote one thing is used to denote another thing similar in some way to the first. Metaphor may be the basis for certain meaning extensions, e.g., the *foot* of a mountain.

NECESSARY CONDITIONS: the conditions that must be met for something to be a member of a category, e.g., in geometry a triangle must be a plane figure, must have three sides, and the ends of the three sides must meet to create three angles**.** See **SUFFICIENT CONDITIONS**.

NETWORK MODEL (N-model): model or theory of word meanings that specifies the sense relations among words.

NON-GRADABLE ANTONYMS: antonyms, typically adjectives, that typically do not allow degree modification, e.g., *clockwise* in *clockwise motion* cannot be modified by expressions such as *very*, cf. **very clockwise*.

PARTONYMY: a **SENSE RELATION** between expressions such that the entities denoted by one expression represent parts of the entity denoted by another, e.g., *blade*/*knife*. The relationship can be paraphrased as *X is a part of Y*, thus a *blade* is a part of a *knife*.

POLYSEMY: situation in which one expression has two or more clearly related meanings.

PROTOTYPE: theory of categorization that posits that membership in categories is a matter of degree rather then of **NECESSARY** and **SUFFICIENT** conditions and that members of a category are ranked according to their degree of similarity to the prototype or best example of the category.

REDUNDANCY RULES: rules that aim to eliminate repetition of information among words that are hyponymically related.

REVERSIVE ANTONYMS: words that represent movement in opposite directions.

RUN-ONS/INS: expressions related to the entry word that are included at the end of a dictionary entry but are undefined because their interpretations are deemed to be predictable from their forms.

SELECTIONAL RESTRICTIONS: semantic requirements that must be met for expressions to go together without anomaly in close grammatical relationships

such as subject and predicate, verb and object, head and modifier, etc.

SEMANTIC COMPONENT: basic, indivisible unit of linguistic meaning.

SEMANTIC FEATURE: see **SEMANTIC COMPONENT**.

SEMANTIC RELATIONS: see **SENSE RELATIONS**.

SEMEME: see **SEMANTIC COMPONENT**.

SENSES: distinguishable meanings of expressions.

SENSE RELATIONS: relations based on the senses of expressions. See **ANTONYM**, **HYPONYMY**, **METAPHOR**, **METONYMY**, **PARTONYMY**, **SYNONYM**.

SUFFICIENT CONDITIONS: the set of conditions such that if something meets them, then that is enough to determine that it belongs to a category, e.g., if something is a plane geometrical figure and has three sides whose ends meet to create three angles, then that is sufficient to classify that figure as a triangle.

SUPERORDINATE: the more inclusive expression in **HYPONYMY**, e.g., *chair* is superordinate to *armchair* because an armchair is a kind of chair.

SYLLABICATION: indications in the spelling of an entry word (usually raised dots) of where the word may be divided at the end of a line of type; also, indications in the pronunciation of an entry word of where the word divides into spoken syllables.

SYLLABIFICATION: indications in the pronunciation of an entry word of where the word divides into spoken syllables.

SYNONYMY: a **SENSE RELATION** in which two or more expressions have the same meaning.

SYNTACTIC FRAME: a representation of the syntactic context(s) into which an expression may be inserted, e.g., a transitive verb must occur in a verb phrase that contains a direct object.

UNMARKED: the member of a pair of related expressions that is less complex semantically or formally than the other member, e.g., *horse* is unmarked in relation to *stallion* because the former includes no information about the animal's sex whereas the latter includes the meaning male. See **MARKED**.

USAGE: from a descriptive point of view, the ways in which expressions in a language are actually used in discourses; from a prescriptive point of view, the ways in which commentators claim expressions ought (or more typically, ought not) to be used in discourses.

USAGE LABELS: expressions in dictionary entries designed to inform users about the entry word's usage.

USAGE NOTE: short, critical essays appended to a dictionary entry when the usage of the entry word is particularly controversial.

WORD HISTORY: short essay appended to a dictionary entry when the history of the entry word is particularly noteworthy.

9 Phrases

KEY CONCEPTS
Definition of ***phrase***
Modification and complementation
Adverb phrases
Prepositional phrases
Adjective phrases
Noun phrases
Verb phrases

INTRODUCTION

No doubt you have noticed that our discussion of parts of speech required us to consider the phrases they occurred in. Although traditional grammars often treat word classes apart from their roles in larger structures, it is really not possible to do so. For one thing, we cannot study a word's functions without viewing it in a larger setting. For another, a single word may constitute a phrase. For instance, a noun phrase may contain just a noun—its head. Likewise, a verb phrase may contain just a verb. Phrases, then, are units of one or more words. They are the lowest syntactic unit.

It is important for us to know about phrases and to be able to distinguish them from words and clauses. This knowledge is essential in at least the two following situations.

Journeyman writers often produce **fragments**, that is, parts of sentences punctuated as if they were sentences. These fragments are rarely just random strings of words; rather, they are typically internally grammatical. They are in fact phrases. Fragments are objected to because they are not the type of expression that more experienced writers would use in the context. They are often a reflection of linguistic patterns used in speech and indicate that the writer has not yet mastered the stylistic differences between the spoken and written modes.

Languages differ in the orders they impose on sequences of words. For example, in English (and many other languages), adjectives typically precede the nouns they modify, whereas in Spanish (and many other languages), adjectives typically follow the nouns they modify. Language learners must learn the orders expected in the target language. Their teachers must know the ordering possibilities and be able to articulate them in ways their students can learn from.

As we examine phrases, then, we study how words relate to each other in the smallest of the larger linguistic structures. In our chapters on Basic

Clause Patterns and Modifications of Basic Clause Patterns, we examine the ways in which phrases form clauses. Our discussion here will treat the five major phrase types in English:

1. Adverb Phrase (AdvP)
2. Prepositional Phrase (PP)
3. Adjective Phrase (AP)
4. Noun Phrase (NP)
5. Verb Phrase (VP)

We will discuss each of the five types in a similar way. First, we will examine their basic functional patterns; then how those functions are realized by structural possibilities; and, where appropriate, we will explore some of the complexities associated with each type of phrase. Whenever such complexities lead us to topics considered in another chapter, we will provide a brief commentary and defer fuller treatment to a later time.

WHAT IS A PHRASE?

Traditionally "phrase" is defined as "a group of words that does not contain a verb and its subject and is used as a single part of speech."

This definition entails three characteristics: (1) it specifies that only a group of words can constitute a phrase, implying that a single word cannot; (2) it distinguishes phrases from clauses; and (3) it requires that the groups of words believed to be a phrase constitute a single grammatical unit. We accept (2) and (3), but must revise (1).

We reject the claim that single words cannot constitute phrases. First, a word and a phrase may play identical grammatical roles in a clause, as (1) and (2) demonstrate:

(1) Most of the members of the genus avis fly.
(2) Birds fly.

Most of the members of the genus avis is the subject of (1) and *birds* is the subject of (2), showing that single words and phrases can function identically in clauses. There are two inferences that we can draw from this fact: (a) a subject can consist of either a single noun or a noun phrase, or (b) subjects are phrases, and so whatever functions as a subject must be a phrase. If we assume (a), then whenever we define *subject* (and any other grammatical function, such as predicate, direct object, indirect object, etc.), we must always specify that it can be expressed as a word or as a phrase. Linguists

would say that this formulation is more complex than it needs to be because it fails to articulate a more general pattern. The broader generalization is that these grammatical relations are always expressed as phrases and phrases can consist of either a single word or a unified group of words. Below, we will show how and when words can be phrases.

Second, single words and phrases may be replaced by identical proforms. We can replace the subjects of both (1) and (2) with *They*:

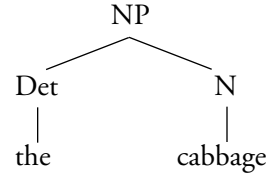
(1) a. They fly.
(2) a. They fly.

Again, there are two inferences we can draw: (a) pronouns can replace either a noun or a noun phrase, or (b) pronouns replace phrases. Again, (b) is more general, but it does require us to specify when words can function as phrases.

A single word may be a phrase when it is the **head** of that phrase. The head of a phrase is the phrase's central element; any other words (or phrases) in the phrase orient to it, either by modifying it or complementing it. The head determines the phrase's grammatical category: if the head is a noun, the phrase is a noun phrase; if the head is a verb, the phrase is a verb phrase, and so on. The head can also determine the internal grammar of the phrase: if the head is a noun, then it may be modified by an article; if the head is a transitive verb, it must be complemented by a direct object. Heads also determine such things as the number of their phrases: if the head of an NP is singular, then the NP is singular; if the head is plural, then the NP is plural. Crucially, the head of a phrase may occur alone in the phrase, that is, without modification or complementation.

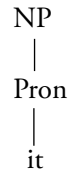
Let's look a little closer at what expressions may be replaced by pronouns. Specifically, let's test the claim made in many textbooks that pronouns can replace nouns or noun phrases. Consider (3):

(3) Fooster hates the cabbage.



If we replace the NP *the cabbage* in (3) with the pronoun *it* we get the perfectly grammatical (3a):

(3) a. Fooster hates it.

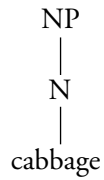


However, given the typical textbook definition of pronoun as a word that can replace either nouns or noun phrases, we should be able to replace just the noun *cabbage* in (3) with *it*. However, when we do so, we create the wildly ungrammatical (3b):

(3) b. *Fooster hates the it.

So, why is (3a) fine but (3b) is not? To create (3a) we replaced the entire phrase *the cabbage*, but for (3b) we replaced only a part of the phrase. It appears that when we pronominalize we must replace an entire phrase with a pronoun, not just a random piece of it. It follows that if we can successfully replace an expression with a pronoun, then that expression must be a complete phrase. To check this, consider what happens when we replace *cabbage* in (3c) with a pronoun; we get the grammatical (3d):

(3) c. Fooster hates cabbage.
(3) d. Fooster hates it.



So *cabbage* is just a noun in (3) and therefore cannot be replaced by a pronoun; but in (3c) it is both a noun and a noun phrase (as the diagram shows), and so can be pronominalized, proved by the fact that (3d) is grammatical.

Let's add just one more test to the two tests for phrasehood we've already used (capable of functioning as a grammatical relation and capable of being replaced by a pronoun): if an expression can be moved from one part of a sentence to another without any internal reorganization, then that expression is a phrase. We can use our *cabbage* sentences for this test too.

We can successfully move *the cabbage* in (3) to the left of the subject, giving us:

(3) e. The cabbage, Fooster hates.

But when we try to move just the N *cabbage*, the result is ungrammatical, just as when we tried to pronominalize *cabbage* in (3):

(3) f. *Cabbage, Fooster hates the.

Analogously, when we move *cabbage* in (3c) in which *cabbage* occurs alone, the result is also grammatical:

(3) g. Cabbage, Fooster hates.

So, we've applied three tests—ability to function as a grammatical relation, pronominalization, and movement—and all three have yielded the same results: a phrase may consist of a unified group of words, or of a single word as long as that word is the phrase's head.

There is an important methodological precept here: the more arguments you can marshal in favor of your analysis and definitions, the more confidence you can place in them.

Our new, improved definition of "phrase": *a phrase is a grammatical unit, intermediate between a word and a clause, which may consist of just one word (its head) or its head and expressions (including other phrases) that modify or complement it* (see below). This definition retains the traditional distinctions between word and phrase and between phrase and clause. It adds the requirement that phrases have heads and allows a phrase to consist of just its head.

In considering word classes, we examined the most important ones first. In this chapter, we will present the three less complex types first— adverb, prepositional, and adjective. The reason for this seemingly backwards approach is that the two major phrase types—noun phrases and verb phrases—often include the minor types as subparts. But first we must make a brief detour to discuss the important distinction between modification and complementation.

MODIFICATION AND COMPLEMENTATION

The head of a phrase may be modified or complemented by other words, phrases, or sentences within the phrase. We begin with complementation as it is perhaps the more easily understood.

When one element in an expression creates the grammatical expectation that another expression will also occur, the expected element **complements** the expecting element. For example, transitive verbs create the expectation of an object, as in *Sheila fractured* [*her ankle*]; bitransitive verbs create the

expectation of two objects, as in *Sally gave* [*her*] [*a shot of morphine*]; certain other verbs create the expectation of two complements, though one or both need not be an NP, as in *She put* [*her first aid kit*] [*away/in the truck*]. Generally, although verbs (in English) require a subject, subjects are not usually said to complement the verb.

Verbs are the primary complement-requiring elements in language, but other parts of speech may require complements too. Prepositions typically require an NP complement—*on* may be complemented by a phrase denoting notions such as location or time, as in *on* [*the pavement*], *on* [*your mark*], *on* [*time*]. Certain nouns may be complemented by clauses, as in *the belief* [*that diseases are caused by evil spirits*].

Modification occurs in a construction in which an expression is accompanied by an element not grammatically required by it. For example, because nouns do not typically require adjectives, *eager* modifies *fans* in *eager fans*. Verbs and adjectives do not typically require that they be accompanied by adverbials, so *violently* modifies *swore* in *swore violently*, and *disappointingly* modifies *slow* in *disappointingly slow*.

Modification may be restrictive or non-restrictive. When one word restrictively modifies another, the modifier restricts the potential reference of the modified. For example, in the phrase *long books* the adjective *long* restrictively modifies the noun *books*. If the word *books* were to occur alone, then it could potentially refer to any and all types of books. The modifier restricts the reference of the phrase to just those books that are long. Nouns may have many modifiers, as in *tall, black, neutered, male, domestic, short-haired cat*. Here we have six modifiers, each restricting the potential reference of the word *cat*. The result of piling up these modifiers is that the actual referent of the phrase must satisfy all of them—it must be a cat that is tall, black, neutered, male, domestic, and short-haired. Each modifier acts like a criterion that the ultimate referent(s) of the phrase must satisfy.

There are two main classes of modifying words in English—adjectives and adverbs. Adjectives modify nouns and adverbs modify pretty much everything else—verbs, adjectives, other adverbs, and sentences. They modify these in much the same way as adjectives modify nouns—by adding criteria that must be met. For example, in *ran quickly*, *quickly* modifies *ran* and therefore requires that whoever ran didn't run in any old way, but did it quickly. Other examples include expressions like *take regularly*, *needs help immediately*. Likewise, *intensely* in *intensely bright* requires that the brightness be intense (cf. *specially packaged*, *medically appropriate*). *Irritatingly* in *irritatingly slowly* requires that whatever is going on must not only be going on slowly, but so slowly as to be irritating to someone (cf. *extremely cleverly*).

Unfortunately in *Unfortunately, he didn't make it back* requires not only that he didn't make it back, but also that (the speaker feels that) it is unfortunate that he didn't (cf. *Sadly, she's no longer with us, Hopefully, it won't happen again*).

Nouns may be restrictively modified by clauses, called relative, adjective, or defining clauses, bolded in *the man* ***who knew too much***. Notice that there is no comma between the noun *man* and the beginning of the restrictive relative clause. Sentences may be restrictively modified by adverbial clauses, bolded in ***Though he liked her a lot****, he was afraid to ask her for a date*. Here a comma is preferred, especially if the adverbial clause is relatively long.

Notice that none of the modifiers are required or implied by the words, phrases, or sentences they modify. These words, phrases, and sentences would be grammatically complete without the modifiers—though of course adding or removing modifiers affects the meaning and potential referents of the modified elements.

Non-restrictive modifiers, or **appositives**, add information that is not essential for the identification of the referent of the phrase so modified. In written English, appositives are set off by commas—*The President of the US****, who is in his 7th year in office,*** *has only one more year to serve*. In cases like this, the writer assumes that the reader will know who the President of the US is and so does not need the appositive information to identify him. Nonetheless, the writer adds the information that the President is in his 7th year in office as a sort of secondary predicate in addition to the primary one, namely, that he has only one more year to serve. In spoken English, appositives are set off from the remainder of the sentence by brief pauses (hence the commas) and a drop in pitch. From a writer's or speaker's point of view, it is essential to decide whether the audience does or does not need the modifier to identify the referent of the phrase.

THE ADVERB PHRASE (ADVP)

The following are examples of **adverb phrases**:

(4) a. adamantly (adverb alone)
b. quite reluctantly (adverb modified by intensifier)
c. extremely clumsily (adverb modified by degree adverb)

From a functional point of view, each AdvP must contain a head, which must be an adverb; this adverb may be modified by an **intensifier**, as in (4b), or by a **degree adverb**, as in (4c). Examples of these are listed in Table 1.

very	extraordinarily
quite	reasonably
rather	particularly
too	extremely
more/most	terrifically
only	
somewhat	

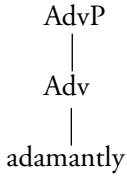
TABLE 1: TYPICAL INTENSIFIERS AND DEGREE ADVERBS

The following formula encapsulates the functional properties of AdvPs:

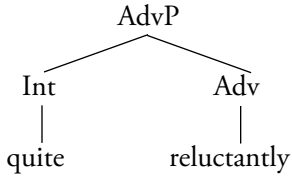
(5) (Modifier) + Head [In formulae like this, parentheses indicate optional elements.]

The **structures** associated with (4a), (4b), and (4c) may be represented by the following trees:

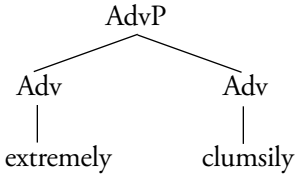
(6)a.



(6)b.



(6)c.



As we noted for single adverbs (i.e., adverb phrases composed of just a head adverb), adverb phrases are relatively movable within a sentence, although the changes in position may be accompanied by changes in meaning, for example:

(7) a. Frankly, my dear, I don't give a damn.
b. My dear, I frankly don't give a damn.
c. My dear, I don't give a damn, frankly.

(8) a. Luckily, his fall was broken by deep snow.
b. His fall was broken by deep snow, luckily.

Exercise

1. For each of the following AdvPs identify its head adverb. If it has a modifier, identify that and determine its part of speech.
   a. quickly
   b. very quickly
   c. particularly extravagantly

2. Draw brackets around each adverb phrase in the sentences below. Then underline the head adverb.
   a. They surrendered peacefully.
   b. I go to the movies quite frequently.
   c. Esmeralda acted awfully strangely.
   d. Very slowly, we edged down the mountain.
   e. Somewhat reluctantly, she returned home a week early.

3. Draw a tree diagram like those in (6) above for each of the AdvPs you identified in the sentences in Exercise (1) above.

Before we move on, we want to broach the topic of how phrase structure trees are created. They are said to be "generated" by **phrase structure rules** (PSRs) such as:

(9) AdvP ——> (Int) Adv

This is to be read as: An adverb phrase (AdvP) consists of (——>) an optional intensifier followed by an adverb.

As we know, however, adverbs may be modified by either an intensifier or another adverb, for example, *extremely quickly.* We represent this choice by placing the items to be selected from in curly brackets: {Int/Adv}. If all these elements are optional, then the curly brackets are put in parentheses: ({ }). So, a more complete PSR for AdvPs would be:

(10) AdvP ——> ({Int/Adv}) Adv

We read this as: an AdvP consists of an optional intensifier or adverb and an adverb.

A note on "Adverbial"

The term "adverbial" refers to adverb phrases and all other expression types that function in the ways that adverb phrases do, namely, as modifiers of almost all parts of speech except nouns. Besides adverb phrases, prepositional phrases (bolded), e.g., *She drove **with great caution*** (cf. *She drove **cautiously***), noun phrases (bolded), e.g., *They do that **a lot***, (cf. *They do that **frequently***), and deictic words (bolded), e.g., *There's nobody **here*** may function as adverbials.

THE PREPOSITIONAL PHRASE (PP)

The following are typical prepositional phrases:

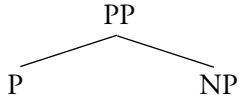
(11) a. on the waterfront
b. of human bondage
c. beyond the blue horizon
d. from the halls of Montezuma
e. with malice toward none

From a functional point of view, PPs are very simple: they consist of a head preposition and an object or complement, which is typically an NP. We can represent this as:

(12) Head + Object

From a structural point of view, each of the PPs in (11) consists of a preposition followed by a noun phrase, and we can represent their basic structure as:

(13)



This phrase structure tree is generated by the following PSR:

(14) PP ——> P NP

We read this PSR as: a PP consists of a P followed by an NP. Noun phrases are discussed in more detail later in this chapter. All you need to know now is the list of single- and multi-word prepositions presented in the chapter on Minor Parts of Speech.

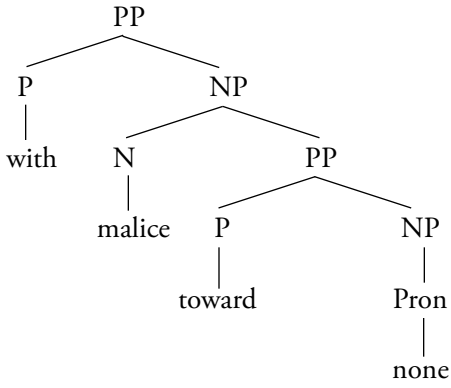
Prepositional phrases are relatively uniform constructions: spot a preposition and the NP that immediately follows it, and you can be fairly certain that you have identified a PP. However, you should recall that some apparent prepositions are actually particles and that others may be subordinating adverbial conjunctions.

Exercise

Draw a tree diagram for each of the phrases (11a-c).

In (11d,e) we find two PPs, one inside the other. You can visually represent (11e) as:

(15)



It may seem odd to treat a preposition as the head of a phrase, because traditional grammar may have persuaded us to regard the preposition as insignificant. In fact, prepositions express meanings that encompass the entire range of key semantic relations in a sentence. Another sign of the importance of prepositional phrases is their ability to appear in so many structures—within noun phrases, verb phrases, and adjective phrases.

The second part of the PP is a noun phrase that functions as its complement or object. This terminology also suggests the central role of the preposition within its phrase. Just as verbs may govern direct and indirect object NPs, prepositions govern object NPs.

Exercise

1. Here are several prepositional phrases. For each, identify its head P and NP complement/object:

a. on the ropes
b. under the boardwalk
c. on a slippery slope
d. around midnight
e. beyond the horizon

2. In the sentences below, draw brackets around the prepositional phrases. Circle each preposition and underline its NP object. Be sure to note where PPs contain other (embedded) PPs. Can prepositions take objects that are not NPs?

a. I put the dynamite in a safe place.
b. In Warden's house, smoking is not allowed.
c. I thank you from the bottom of my heart.
d. Hilda peeked from behind a tree.
e. After all of his warnings about the dangers of cigarettes, Benjy consumed a cut of meat with a huge amount of cholesterol.
f. Oscar resigned in the face of increasing evidence of his association with disreputable companies.

3. Using the movement test, show that the italicized sequences are phrases:

a. *In times of danger,* everyone must rally behind the leader.
b. *At the end of the day,* he is always very tired.
c. It is easy to identify phrases *with examples like these*.

4. From the discussion above, identify the ideas that show how a preposition is the head of its phrase. Consider also how the following sentences add further support for this claim:

a. Sheila hit the ball almost into the parking lot.
b. Werner spilled oil all over his new jacket.

Try to think of other sentences similar to these. How do they call for a revision of our formal and functional formulas for PPs?

Prepositions are often simply characterized as linking words, and this is an accurate characterization as far as it goes. However, we'd like to have a more complete concept of how they work. Typically prepositions have

meanings and these meanings connect their objects to other parts of the sentences in which they occur. For example, in (16), *to* indicates that its object NP represents the recipient of the money:

(16) Tony donated $10,000 to the hospital.

In (17), *for* indicates that the cardiac laboratory is to be the beneficiary of the money:

(17) The money was for the cardiac laboratory.

Notions such as recipient and beneficiary are called **semantic roles**, about which we will have much more to say in our chapter on Basic Clause Patterns.

THE ADJECTIVE PHRASE (AP)

Each of the following is an AP:

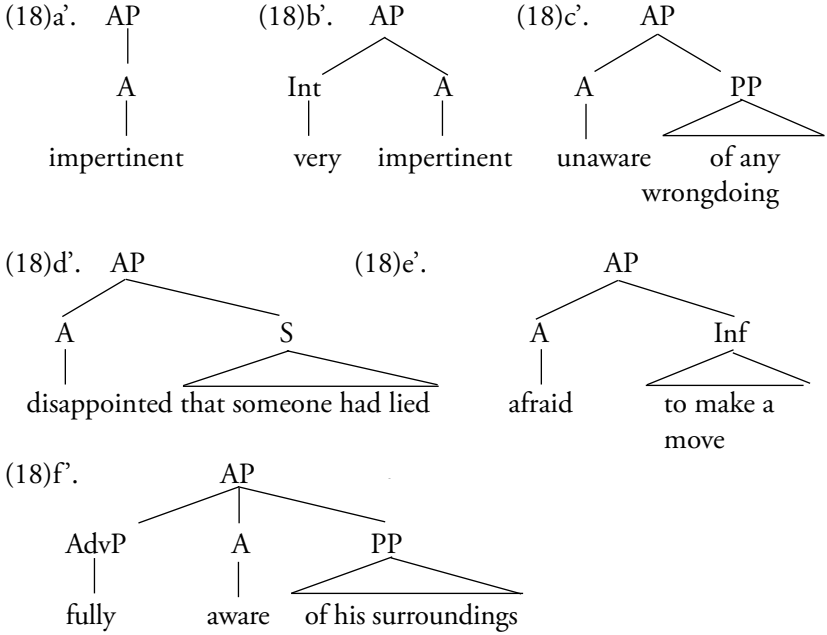
(18) a. Impertinent (adjective alone)
b. Very impertinent (intensifier + adjective)
c. Unaware of any wrongdoing (adjective + PP)
d. Disappointed that someone had lied (adjective + clause)
e. Afraid to make a move (adjective + infinitival)
f. Fully aware of his surroundings (adverb + adjective + PP)

From a functional perspective, adjective phrases may be analyzed as:

(19) (Modifier) + Head + (Complement)

The modifiers may be either intensifiers or degree adverbs, just as in AdvPs; the complements may be PPs, finite clauses, or infinitivals. Only some types of adjectives take complements—mainly those that denote mental or emotional states, e.g., *aware*, *afraid*, *sorry*, *disappointed*, *astonished*, *hopeful*, *sad*.

We can represent the structures of (18a-f) as the following trees, respectively:



These trees can be generated by the following PSR:

(20) AP ——> ({Int/AdvP}) A ({PP/S/Inf})

We read this as: an adjective phrase consists of an optional intensifier or adverb phrase, an adjective, and an optional PP, S, or infinitival.

Exercise

1. Each of the following is an adjective phrase. Identify its head adjective, any modifiers, and any complements. For each modifier and complement you find, indicate its part of speech.

   a. sad
   b. quite attractive
   c. extremely volatile
   d. disappointed that he has to leave
   e. eager to get on with his life

2. In the following clauses, draw brackets around each AP, underline the head adjective, and identify any modifiers and/or complements and provide their parts of speech. Don't forget to use formal criteria to

check that the word you underline actually is an adjective.

a. The undernourished animals recovered.
b. My boss is happy with my work.
c. Mindy was completely unaware of his ability to dance.
d. The reasons for his sudden resignation eluded even the most astute observers in the company.
e. Afraid of real combat, George bought a large squirtgun.
f. George is extremely generous to his wealthy friends.

3. For each of the following adjectives, create at least three APs: *aware, afraid, sorry, disappointed, astonished, hopeful, sad*. In the APs you create, include at least one PP complement, one finite clause complement, and one infinitival complement.

4. Draw a tree diagram with full detail (i.e., include part of speech labels for each word and internal phrase) for the expression *very sure of himself*.

APs have three main functions. First, they may directly modify nouns. In this function they are often called **attributive adjectives**, as in *friendly dogs*.

Second, APs may complement subject NPs. In this function they are referred to as **predicative** or **subject complements.** Predicate adjectives occur after verbs of the *be-become-seem* type.

(21) a. Faust is *anxious*.
b. Mephistopheles became *despondent*.
c. Wagner seems *puzzled*.

Third, an AP may function as an **object complement**, that is, as the complement of the object of a clause:

(22) a. We consider him *foolish*.
b. Your attitude makes me *angry*.

Adjectival object complements are particularly common in certain set phrases, such as *make X clear*. Table 2 contains a sample of such set phrases.

cut X short	pack X tight
drain X dry	push X open

keep X loose	put X straight
leave X clean	set X right
make X plain	shake X free
wash X clean	work X loose

TABLE 2: ADJECTIVES AS OBJECT COMPLEMENTS (X = DIRECT OBJECT)

THE NOUN PHRASE (NP)

We begin our discussion of noun phrases (NP) with NPs that consist of just a single word and discuss their functional and then their formal properties. Then we will move on to various types of multi-word NPs.

Simple NPs: single word phrases

The left-hand column in Table 3 lists categories of single words that may constitute an NP, and which must consequently be its head; the italicized expressions in the right-hand column in Table 3 are examples of single-word NPs belonging to the corresponding category.

CATEGORY OF HEAD WORD	EXAMPLE
Noun, count	*Wombats* are playful.
Noun, non-count	*Cabbage* is nutritious.
Subject and object personal pronouns	*They* saw *her*.
Genitive personal pronoun	*Mine* are chartreuse.
Indefinite pronoun/quantifier	*None* were found.
Wh-word/pronoun	*Who* placed the call?

TABLE 3: SINGLE-WORD NPS

All of the word categories in the right-hand column are noun-like, so in order to abbreviate and to simplify matters, let's refer to them all as **nominals**. Every NP, like every other phrase, must have a head, and any nominal can be the head of an NP.

From a structural point of view, we can represent the possibilities in Table 2 in the following simplified tree structure:

(23) a. NP
|
Nominal

This tree is generated by the PSR:

(23) b. NP ——> Nominal

We can read this as saying that an NP consists of any kind of nominal.

More complex NPs

We begin this section by presenting two very general functional formulas for NPs. We give these two because it would be confusing to combine them into a single formula.

(24) a. (Premodifier*) + HEAD + (Postmodifier*)
(Asterisks denote elements that may appear more than once.)
b. (Complement) + HEAD + (Complement)

Formula (24a) states that a noun phrase must contain a head word (which, of course, must be a nominal) but need not contain anything else. If the NP has more elements than the head, it may contain one or more premodifiers (modifiers that precede the head) and/or one or more postmodifiers (modifiers that follow the head). This formula thus abbreviates several possibilities:

(25) a. Head
b. Premodifier(s) + head
c. Head + postmodifier(s)
d. Premodifiers(s) + head + postmodifiers(s)

Formula (24b) states that a noun phrase must contain a head, which may be preceded or followed by a complement. It also abbreviates several possibilities:

(26) a. Head
b. Complement + Head
c. Head + Complement
d. Complement + Head + Complement

We will deal with these possibilities in sequence.

More complex NPs: single-word premodifier + head

Table 4 illustrates NPs whose heads (bolded) are modified by single-word premodifiers (italicized). The part of speech of the premodifiers is given in the left-hand column.

FORM OF PREMODIFIER	EXAMPLE
Article	*The* **wombats** escaped.
Adjective Phrase	*Strong* **winds**.
Demonstrative pronoun	*That* **vase** is valuable.
Genitive NP	*Sheila's* **serve** is powerful.
Genitive pronoun	*Her* **serve** is powerful.
Noun	*Metal* **plates** shielded the instruments.
Indefinite pronoun/quantifier	*Some* **survivors** remained.
Wh-word	*Which* **lobster** do you want?
Numeral	*Seven* **boxes** fell.
Ordinal	*Second* **thoughts** assailed us.
Quantifier	*Several* **vats** of beer.
Negative	*No* **accidents** were reported.

TABLE 4: SINGLE-WORD PREMODIFIERS

Exercise

In each sentence below, identify all the NPs; then identify the part of speech of the head and of any premodifier(s) in each NP:

a. The evidence was unconvincing.
b. Party invitations are always welcome.
c. Many people have visited that exhibition.
d. Their intuitions make them remarkable therapists.
e. Dust mites cause serious allergies in some people.

The range of premodifiers of noun heads is large, including nearly all the parts of speech. The items in Table 4 present the basic possibilities. The most frequently used modifiers are the articles, which we briefly discussed in our chapter on Minor Parts of Speech. Here we will elaborate on that discussion.

We noted that one major use of an article is to indicate whether the NP in which it occurs is definite or not: if the NP is definite, then the speaker/writer assumes that the hearer/reader can identify the referent of the NP; and if the NP is indefinite, then the speaker/writer assumes that the hearer/reader

cannot identify its referent.

Yet another meaning associated with NPs is that of **referentiality**. A **referring NP** may be either definite or indefinite but it denotes a particular entity or set of entities: the bold NP in ***The/A man*** *sat down* refers to some particular man.

The opposite of a referring NP is an **attributive** or **non-referring** one. An attributive NP provides a description but does not refer to any particular individual(s). Anyone or anything that fits the description will do. Attributive NPs can often be paraphrased by *whoever . . .*, *whatever . . .*, or *any . . .*, as in ***The man who /Whoever steals my purse*** *steals nothing*.

(27) a. I saw **the** elephants at **the** zoo. (referential and definite)
b. **The** next caller will win a vacation to Miami. (attributive and definite = whoever is the next caller)
c. I want **an** elephant. Its name is Big Bob. (referential and indefinite)
d. I want **an** elephant. Any pink one will be fine. (attributive and indefinite.)

Finally, NPs can have a **generic** or **non-generic** reference. **Generic** reference designates an entire class (i.e., category, set) of entities. A non-generic reference designates a particular member or members of a class.

(28) a. Cats are skilled predators. (generic, indefinite)
b. A cat is a skilled predator. (generic, indefinite)
c. A cat is asleep on the table. (non-generic and indefinite)
d. The cat is asleep. (non-generic and definite)
e. The cat is a skilled predator. (ambiguous: generic or non-generic and definite)

Exercise

Identify each italicized expression as (a) definite or indefinite, (b) referential or attributive, and (c) generic or non-generic. You will have to imagine a situation in which each sentence is used. Note where ambiguities arise.

a. I need *a sandwich*.
b. I need *a part for my car*.
c. Alice wants to protect *the elephant*.
d. *The president's detractors* must be insane.

The only somewhat difficult case in Table 4 is the **noun modifier**, that is, the case where a noun modifies a head noun, as in *metal plates*. Remember that *metal* is not an adjective for formal reasons—e.g., it cannot be compared or intensified: **metaler*, **more metal*, **very metal*. Noun modifiers appear frequently when one speaks of a material out of which something is made, but the semantic range of such constructions is extensive:

(29) a. government spying
b. state law
c. pie chart
d. desert safari
e. Sunday newspaper
f. stone wall
g. plastic cups
h. cardboard boxes

Exercise

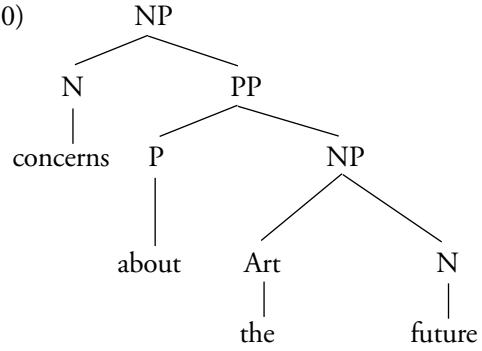
1. Try to describe the semantic/meaning relations between the head noun and its noun modifier in each of the constructions in (29).

2. What do writing handbooks say about the use of noun modifiers? Examine a piece of real-life prose, identifying various types of premodifiers. Can you determine different writing styles according to their variety?

More complex NPs: head + prepositional phrase

Most of the simple premodifiers above contain one word. The least complex postmodifier—and by far the most common—is the prepositional phrase (PP). Remember that PPs consist of a preposition and a noun phrase. So this simple postmodification will have the structure: N + PP. (31a-f) are examples, each with the structure:

(30)



(31) a. songs about rebellion
b. clocks on the wall
c. walks with my mother
d. arguments about abortion
e. reasons for my hesitation
f. sources of concern

Exercise

Provide a fully labeled tree diagram for each of the NPs in (31a-f).

A problem that arises with expressions in which a N is followed by a PP is whether the N and PP actually combine to form a noun phrase, as in the examples in (31), or whether they are simply a non-unified sequence of N followed by PP, as in *Put the book on the shelf*. In this expression, the N *book* is not combined with the PP *on the shelf* into an NP. It is important to have ways of identifying which kind of expression we are dealing with.

Remember that we said that one test for phrasehood is the possibility of being replaced by a single word. In the case of NPs these words would be pronouns. So, if a sequence of words can be replaced by a pronoun, then it is very likely an NP. For instance, you could replace all of the expressions in (31) by some form of the word *they*. Let's call this test the **Pronoun-Substitution (Pro-Sub) Test**. To see how it works, let's consider (32):

(32) a. Woody admired the picture on the wall.
b. Woody put the picture on the wall.

Applying the Pro-Sub Test to *the picture on the wall* in (32a) we get (33a):

(33) a. Woody admired it.

This is grammatical, so in **(32a)** *the picture on the wall* is a unified NP.

When we apply the Pro-Sub Test to the same sequence of words in (32b) we get (33b):

(33) b.*Woody put it.

This is ungrammatical, showing us that *the picture on the wall* in **(32b)** is not a unified NP.

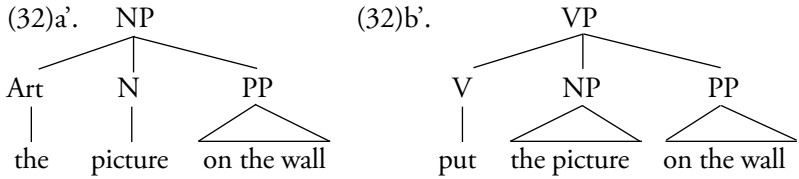
If we now apply the Pro-Sub Test to *the picture* in (32b) we get:

(34) Woody put it on the wall.

This is grammatical, showing us that *the picture* in **(32b)** is separate from *on the wall*.

These patterns of grammaticality lead to the conclusion that (32a) contains an NP made up of a head with a PP postmodifier and that (32b) contains the simpler NP *the picture* followed by a separate PP *on the wall.*

We can represent these by the following tree structure diagrams:



Exercise

1. English contains several different types of pronouns—demonstratives, wh-pronouns, and the like—and pronoun substitution tests can be created using any of them. Using wh-pronouns we can create the **wh-question Test**. In this version of the Pro-Sub Test, you replace the sequence under analysis with an appropriate question word and turn the sentence into a question. Let's apply this test to (32a,b) just as we applied the original Pro-Sub Test. First replace *the picture on the wall* in (32a) with an appropriate wh-word and turn the result into a question. If the result is grammatical then the sequence is a unified NP. If the result is not grammatical

then you have evidence that the sequence is not a unified NP. Now apply the same test to the sequence in (32b). Follow the same procedure and logic. You should find again that in (32a) *the picture on the wall* is an NP, but that in (32b) *the picture on the wall* is not.

2. You will recall also that movement is a good test for phrasehood. The active-passive relationship you read about in our chapter on Minor Parts of Speech provides the basis for a movement test that can identify NPs. Recall from that discussion that the passive subject NP corresponds to the active object NP and the active subject NP corresponds to the NP that is the object of passive *by*. These correspondences are indicated by subscripts in:

Active: [$_1$ Masked raiders] breached [$_2$ the security system].
Passive: [$_2$ The security system] was breached by [$_1$ masked raiders].

Given that subjects are generally NPs, if an expression can be turned into a passive subject then it is an NP. We can apply this test to (32a,b):

(32) a. Woody admired the picture on the wall.
c. The picture on the wall was admired by Woody.

Because (32c) is grammatical the sequence *the picture on the wall* must be an NP in (**32a**).

(32) b. Woody put the picture on the wall.
d. *The picture on the wall was put by Woody.

Because (32d) is ungrammatical, the sequence *the picture on the wall* cannot be an NP in (**32b**).

Use the passive test to show that the italicized phrases in the following sentences are NPs:

a. Grammatical tests prove *grammatical categorizations*.
b. Teenagers mow *lawns*.
c. Obsessive-compulsives write *grammar books*.
d. The military developed *the internet*.
e. The teachers forced *the unfortunate students* to read grammar books.

There is also a paraphrase test for a noun head + PP. If you can insert the words *which is/was* or *that is/was* between the noun head and the PP, the construction is probably of the head + postmodifier type. We call this the **Whiz-test**. (*Wh* comes from *which*; *iz* comes from the pronunciation of *is*). Applying this test to (32a) and (32b) we end up with the paraphrases (32e,f), respectively.

(32) e. Woody admired the picture which was on the wall.
f. *Woody put the picture which was on the wall.

That (32e) is grammatical indicates that *on the wall* is a postmodifier of *picture* in (**32a**) and thus that *the picture on the wall* is a phrase in that sentence; the ungrammaticality of (32f) indicates that *on the wall* is not a postmodifier of *picture* in (**32b**) and thus that *the picture on the wall* is not a phrase in that sentence.

Thus we can conclude that *the picture on the wall* in (**32a**) is a unified NP containing a head noun and a following PP. In contrast, in (**32b**), *the picture on the wall* is not a unified NP.

Our tests demonstrate aspects of the process of **grammatical reasoning**—the use of tests, the need for several tests, consideration of multiple hypotheses, and the role of grammaticality judgments. A further dividend is that the tests we have just described will apply to just about any type of NP, not just those involving PP postmodifiers.

More complex NPs: multiple premodifiers

Our examples so far have dealt only with single word premodifiers, but premodifiers can be multiplied, as (35) shows.

(35) a. *the two* culprits (article + numeral)
b. *those metal* plates (demonstrative + noun)
c. *several other* candidates (quantifier + indefinite)
d. *one such* oddity (numeral + indefinite)
e. *a second* chance (article + ordinal)

Exercise

Identify the premodifiers and their types in:

a. several handsome geldings
b. long boring sessions
c. three French hens

d. a rock quarry
e. many such steamy scenes

More complex NPs: phrasal premodifiers

Multiple one-word premodifiers cause little trouble for students. But phrasal prenominal modifiers are more complicated. Table 5 presents some major types. (We deal with verbal phrases in our chapter on Multi-Clause Sentences.)

FORM OF PREMODIFIER	EXAMPLE
Genitive NP (GenNP)	*This friend's* hobby is knitting.
Adjective phrase (AP)	*Very old* memories return easily.
Verbal phrase (VblP)	*Carelessly organized* meetings annoy everyone.

TABLE 5: PHRASAL PREMODIFIERS

Phrasal premodifiers can be expanded, adding greater complexity to the structure. Moreover, genitive NPs and APs readily combine with other structures to create heavily premodified NPs:

(36) a. *My friend's* hobby is interesting.
(GenNP *my friend's* modifies *hobby*; genitive pronoun (GenNP) *my* modifies *friend*.)
b. *All my friend's* hobbies are interesting.
(GenNP *my friend's* modifies *hobbies*; *my* modifies *friend*; *all* modifies *my friend's hobbies*)
c. *All my friends' very old* plates (three premodifiers: quantifier *all*; Gen NP with genitive premodifier *my friends'*; AP with intensifier *very old*)
d. *Those very old counterfeiting* plates belonged to Capone.
(three premodifiers: demonstrative *those*; AP with intensifier *very old*; verbal phrase *counterfeiting*)

Exercise

Describe the meaning difference between (36b) and *All my friends' hobbies are interesting*. Note the positions of the apostrophes.

Genitive NPs raise two further issues of complexity. First, they are closely related to postmodifiers that use a prepositional phrase headed by *of*. Compare the following.

(37) a. my friend's hobbies
b. the hobbies of my friend
c. my friend's house
d. the house of my friend
e. the house of the friend that I met in Palo Alto
f. the birth of a daughter
g. a daughter's birth
h. my daughter's birth
i. the home of the brave
j. ?the braves' home [Note: (37i) and (37j) have different meanings.]
k. a cup of soup/coffee/tea
l. *a soup's/coffee's/tea's cup
m. a wedge of cheese
n. *a cheese's wedge
o. a pat of butter
p. *a butter's pat
q. a ream of paper
r. *a paper's ream
s. a fistful of dollars
t. *a dollar's fistful

These examples indicate that the choice of premodifier genitive vs. *of*-genitive depends on various factors:

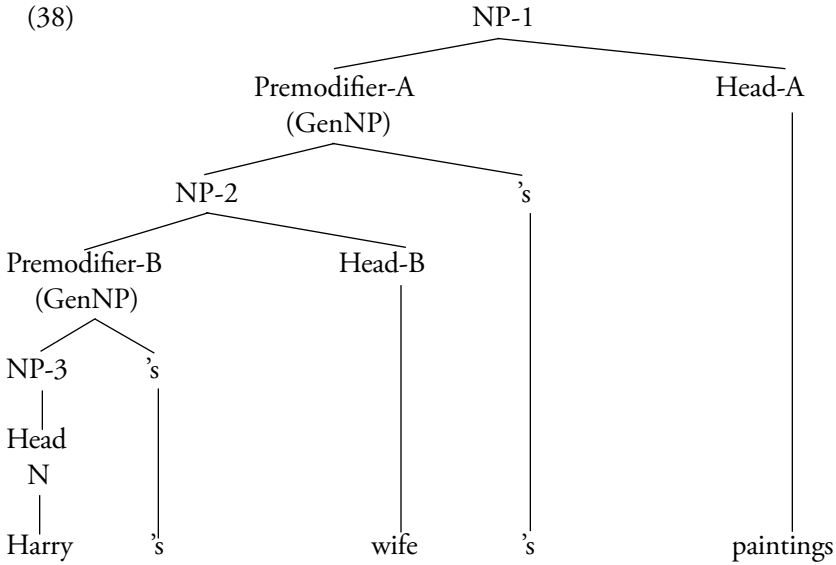
a. The length of the GenNP: the longer the GenNP, the more likely we are to use an *of*-genitive, e.g., (37e).
b. Whether the entity represented by the genitive is animate or not; if it is, we are more likely to use the premodifier genitive; cf. *the cat's fur* vs. ?*the wheel's rim*).
c. If the GenNP is a pronoun, we strongly prefer the premodifier genitive; cf. *her car* vs. **the car of her*, *Sophie's Choice* vs. ?*A Choice of Sophie('s)*.
d. Note the meaning difference between *her photographs* and *photographs of her*. The first can have many meanings, e.g., photographs she owns/took/ordered/designed/etc. The second means photographs in which she is pictured.
e. An NP containing a premodifier genitive is definite, but a post-

modifier genitive allows indefinite determiners to modify the head noun; compare the definite NP *Oscar's friend* with the indefinite NP *a friend of Oscar's*.

While native speakers are not likely to have trouble with such complexities, non-native students may encounter serious difficulties with this construction.

The second complexity is that genitive NPs themselves contain a NP. When one structure contains another structure, we say that the second structure is **embedded** in the first. The NP *Harry's wife's paintings* contains a genitive NP within a genitive NP. In other words, *Harry's* is embedded within *Harry's wife's*, which in turn is embedded in *Harry's wife's paintings*. This structure is represented in (38):

(38)



Embedding allows one function (or form) to contain other functions (or forms). An understanding of embedding is critical to analysis of grammatical structures with any significant degree of complexity. Let's illustrate this fact with diagram (38). NP-l (*Harry's wife's paintings*) consists of a premodifier of the form GenNP (*Harry's wife's*) and a head noun (*paintings*). The GenNP in turn consists of a full NP (NP-2), along with the genitive inflection *'s*. In other words, the form NP-2 is contained in the form NP-l. NP-2 contains a premodifier (*Harry's*) and a head noun (*wife*). Finally, premodifier-B contains a single noun head (*Harry*), the *'s*, and no premodifiers.

Under NP-3, we could have chosen a premodifier with a possessive pronoun and a noun modifier to give us *my uncle Harry's wife's paintings*. We could even have selected another GenNP under NP-3, in which case we might have gotten *Harry's cousin's wife's paintings*. In fact, we could (in principle) go on to infinity, producing ever longer and more genealogically bizarre structures: *Harry's aunt's cousin's son's granddaughter's niece's sister's step-child's friend's paintings*.

Embedding enables language to be infinite in the number and length of the sentences it can create. Fortunately, speakers tend to use these possibilities sparingly, though occasionally writers such as Dylan Thomas, Henry James, and William Faulkner toy with them. As you progress through this book, you will see the pervasiveness of embedding.

Before we leave premodifiers of Ns we must address one final matter, namely the order of premodifiers. There are many proposals in the grammatical and linguistic literature, many of remarkable complexity. The following, adapted from Frawley (1992: 482-3) is a partial list:

Det	> quantity	> value	> physical property	> age	> color	> Head
The	five	good	long	old	brown	tables

Other languages allow different orders, so your non-native English speaking students may come up with utterances that violate the order rules, such as the following from a Korean student:

the weakness of the each student

Exercise

Identify and draw brackets around each NP and underline its headword. Using Tables 3 and 4, identify the type of each premodifier in the NP.

a. We noticed several suspicious details.
b. My best friend's parents gave his younger sister a European tour as a graduation present.
c. Three false alarms were mysteriously called in during exam week.

Complex NPs: The range of postmodifiers

As complicated as possessives are, we easily recognize the infrequency of expressions such as *Harry's uncle's cousin's sister's paintings*. Much more common—and much more complex—are the various sorts of phrases and

clauses that follow head nouns. We have already examined the prepositional phrase, probably the simplest postmodifier. Yet even this innocent construction raises the specter of mind-boggling expansions. Like possessive NPs, prepositional phrases contain noun phrases, which can contain prepositional phrases, which can contain other NPs which can contain a PP . . . all the way to the linguistic loony bin. In case you have doubts, consider the NP in (39):

(39) The book in the drawer of the desk in the office of the leader of the rebellion against the oppression of readers of tales of adventures on far planets of the galaxy . . .

Complexity is due also to the potential for various sorts of postmodifiers, each more structurally intricate than the premodifiers. We treat these structures more fully in other chapters. For the present, we will introduce the major types of postmodifiers and comment briefly on them.

POSTMODIFIER TYPE	EXAMPLE
Adjective phrase (AP)	[Anyone *fond of kumquats*] should buy this cookbook.
Appositive NP (AppNP)	[His nominee, *an infamous scoundrel*,] is unlikely to be elected.
Relative clause (RC)	[The contestant *who guesses the title*] will win a trip to Tahiti.
Appositive relative (AppRC)	[G.W. Bush, *who is the 43rd President of the US*,] is only 60.
Verbal phrase (VblP)	[The contestant *guessing the title*] will win a vacation in Tahiti. [The person *seated at the president's right*] is her bodyguard. [The player *to watch*] is Tzrdsky.

TABLE 6: COMPLEX POSTMODIFIERS

We have seen **adjective phrases** (APs) that function as premodifiers. Such constructions tend to be brief—one or two words if the adjective is not coordinated. However, some adjectives can, like nouns, appear with their own postmodifiers. (In the example in Table 6, *of kumquats* is a PP that complements *fond*; since that PP contains an NP, expansions like that in (39) are possible.) APs with complements or postmodifiers almost always occur in the

postmodifier position of noun phrases. Postmodifying APs also tend to allow the Whiz-test: *Anyone **who is** fond of kumquats*.

If the head of the NP is an indefinite pronoun such as *someone*, *something*, *anything*, *nothing*, then any attributive AP will occur after it:

(40) a. I heard something *strange*.
b. I haven't heard anything *new*.
c. I see nothing *unusual*.

Appositive noun phrases (AppNPs) and **Appositive Relative Clauses** (AppRCs) occur as "parenthetical asides" after their head noun. They are usually blocked off in writing by surrounding commas (dashes are also possible). In speech, they are surrounded by perceptible pause and often a fall in voice pitch, akin to the aside spoken by a stage actor. The appositive NP has the same referent as the rest of the NP. Thus in Table 6 *his nominee* and *an infamous scoundrel* designate the same individual. Since appositives can be expanded just like any other NP, they allow for infinite embedding. Sentence (41) suggests the possibilities.

(41) His nominee, *an infamous scoundrel with principles learned from years of service in one of the most corrupt political machines ever devised by the devious minds that have blemished history*, is unlikely to be elected.

Appositives provide extra information that is generally viewed as not being required for the identification of the referent of the NP. Some handbooks say that they can be omitted without changing the meaning of the sentence they occur in. This is quite misleading. The meaning of the sentence certainly changes, though what the affected NP refers to may not.

Verbal phrases (VblPs), which will be dealt with further in our chapter on Multi-clause Sentences, are like adjective phrases: short VblPs precede noun heads; longer VblPs, which may possess their own range of objects, complements, and modifiers, follow the head noun within a noun phrase. In general, short modifiers tend to precede head nouns and longer ones tend to follow them.

Relative clauses were introduced in our chapter on Minor Parts of Speech and will be more fully discussed in our chapter on Modifications of Basic Clause Patterns. These clauses usually begin with a wh-word, *that*, or no introducer at all: *The soldier **who** died . . . , The thing **that** gets me . . . , The book [ ] you wrote . . .*

Exercise

Draw brackets around each NP and underline its headword. Using Tables 4, 5, and 6, indicate the type of each premodifier and/or postmodifier that you find.

a. Don't go out in the midday sun.
b. The cat near the window is Salome.
c. Alvin set the goldfish bowl near the window.
d. I saw the cat near the window. (ambiguous: analyze two different ways)
e. The squirrel that Bonzo, my pet chimp, chased became quite flustered.
f. Some friends of Boris gave him a box filled with his favorite candy as a going-away present.
g. The witnesses at the scene noticed a stranger who drove away in a red station wagon full of flowers.

Complements in NPs

Complements in NPs typically follow the head N, though some may occur before it, giving us the formula:

(42) (Complement) + H + (Complement)

The complements before the head may be either nouns or, more rarely, adjectives:

(43) a. a fiction writer cf. someone who writes fiction.
b. an economics professor cf. someone who professes economics.
c. a technical writer cf. someone who writes technical manuals/ materials.
d. a financial adviser cf. someone who advises on financial matters.
e. an ecological expert. (Huddleston and Pullum 2002: 439)

When the complement follows the head N it must be either a PP or a clause:

(44) a. the trip *to Disneyland* (PP)
b. the claim *that the war is justified* (*that*-clause)
c. the question *whether we've won* (embedded/indirect question)
d. the question *'Are we there yet?'* (quoted question)

e. the request *to withdraw* (*to*-infinitival clause)

Noun complement clauses are also discussed in our chapter on Multiclause Sentences.

Nominalization

In our chapter on Morphology and Word Formation, we describe how a word belonging to one part of speech may be derived from a word belonging to a different part of speech. **Nominalizations** are nouns derived from words belonging to other parts of speech. Here we focus only on nouns derived from verbs. These derived nouns can head noun phrases, just like any other noun. However, their relationship to verbs allows them to have subjects and objects. For example, *amusement* is derived from *amuse*, which is a transitive verb and so grammatical in a sentence with both a subject and a direct object, such as (45):

(45) a. The clown amused the children.

We can nominalize (45a) as the NP (45b):

(45) b. The clown's amusement of the children.

Notice that in the nominalization, the subject of the clause in (45a) shows up as a genitive premodifier, *The clown's*, and that the direct object of the verb in (45a), *the children*, shows up as the object of the preposition *of*.

Exercise

1. Nominalize the following sentences.
   a. Werner inspected the package.
   b. Pamela enjoys bobsledding.
   c. The truth gradually emerged.

2. Change the following noun phrases to sentences by reversing the nominalization.
   a. Manuel's toleration of teasing
   b. Oscar's avoidance of hard work
   c. Helen's expectation that she would be rescued

3. Nominalization occurs more frequently in written texts, and especially technical and academic texts, than in speech. Pick a paragraph

in a scientific text and a similar sized section of dialog in a novel and compare the number of nominalizations in the two.

Complex NPs: Coordination

Perhaps on the principle that too much of a good thing is impossible, languages allow us to repeat NPs indefinitely. Coordinated NPs are joined by a coordinating conjunction, such as *and* or *or*, as in (46):

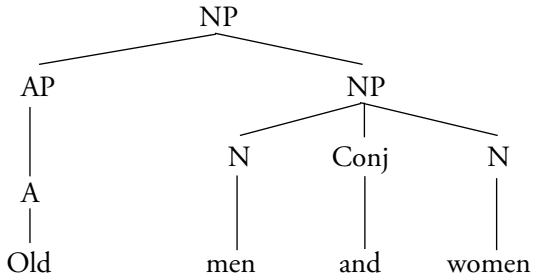
(46) *My sister* and/or *her best friend* will deliver the letter.

Such structures are relatively simple to deal with—except for one problem. Consider the ambiguous sentence (47):

(47) Old men and women will be served first.

Who will be served first? Old men and all women? Old men and old women? The answer seems to depend on whether the premodifying adjective *old* applies to *men* only or to the conjunction of *men and women*. To differentiate these possibilities, we must allow not only full NPs to coordinate but also heads of NPs. We represent the ambiguity diagrammatically in (48).

(48)a.



(48)b.

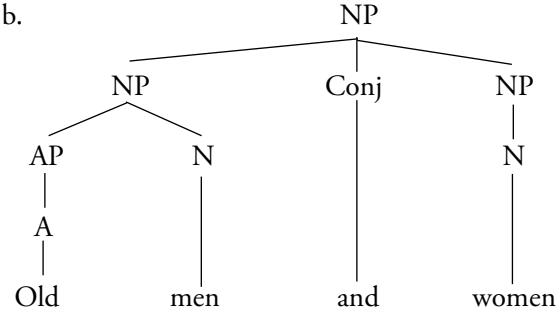


Diagram (48a) represents the situation in which *old* modifies the NP *men and women*; (48b) represents the situation in which *old* modifies only *men*.

THE VERB PHRASE (VP)

We begin with the functional formula for VPs and then examine the forms that can satisfy those functions.

(49) VP Functional Formula

(AUXILIARY*) + HEAD + (OBJECT*) + (COMPLEMENT*) + (MODIFIER*)

This formula states that a VP must contain a head word, optionally preceded by one or more auxiliaries, and optionally followed by object(s), complements, and/or modifier(s).

Simple VPs: head alone

Single-word VPs always consist of a head word that is an intransitive verb, bolded in the examples in (50). The syntactic structure of such intransitive verb phrases is given in (50'):

(50) a. Hector **walks**.
b. All the employees **agree**.
c. The lemmings **followed**.
d. Cynthia **lied/laughed/coughed/died/** . . .

(50') VP
|
V

In school grammars, the terms **main verb** and **simple predicate** sometimes are used for the head word of the VP.

VPs: auxiliaries and head

In our chapter on Major Parts of Speech, we distinguished between main verbs and auxiliary verbs. The discussion primarily concerned head verbs. However, heads often occur in the company of other verbs, called **helping verbs**, **auxiliaries**, or simply **Aux**, some of whose functions we described in our chapter on the Minor Parts of Speech.

The major auxiliary verbs in English are *have*, *be*, and *do*. (In our chapter on Minor Parts of Speech we briefly discussed the **modal auxiliaries** *will*, *would*, *can*, *could*, *shall*, *should*, *may*, *might*, and *must*.) The uses of *have*, *be*, and *do* are illustrated in (51):

(51) a. The zombies *departed* from Hector's house. (head alone)
b. Hector *is acting* strangely. (*be* + head verb in Ving form)
c. Hector *has* never *looked* at me like that. (*have* + head verb in past participle form)
d. Hector *does* not *eat* vegetables. (*do* + head verb in infinitive form)
e. Hector *has been consorting* with the zombies. (*have* + *be* in past participle form + head verb in Ving form)

As these examples show, a verb phrase will generally contain one head verb; in English, auxiliaries always precede the main verb. The auxiliaries may be separated from the verb, either through interruption by items like *never* as in (51c) or by inversion as in ***Has*** *Hector* ***seen*** *Oswald*? Let's examine these auxiliaries in more detail.

Have is the auxiliary associated with the perfect aspect. It can accept all of the four potential inflections of a main verb, although its third person singular present tense and past tense forms are slightly irregular:

(52) a. **have** sung
b. **has** sung
c. **had** sung
d. **having** sung

These examples also demonstrate that auxiliary *have* is followed by a verb (whether another auxiliary or a main verb) in the past participle form, which we have abbreviated Ven. So our formula for auxiliary *have* is HAVE + Ven. The syntactic structure that corresponds to this formula is:

(53)



A word of caution: *have* may also serve as a head verb. If a single instance of *have* is the only verb in a clause, then it is a main verb and therefore head of its VP: *I* ***have*** *a cold*. If two instances of *have* occur, the first is an auxiliary, as in *I* ***have*** *had a cold for two weeks*, and the second is the head verb.

Exercise

Using (a) as a model, identify the two elements of the perfect in each

of the following examples:

a. We *have* eat*en* all the pizza.
b. They have been in there for hours.
c. Bill has seen the light.
d. The fugitive has taken the bus.
e. The police have blocked the roads.
f. They haven't found her yet.

Be is the auxiliary associated with the progressive aspect, which is compatible with almost all the possible forms of *be*:

(54) a. **be** singing
b. **am** singing
c. **is** singing
d. **are** singing
e. **was** singing
f. **were** singing
g. **been** singing
h.*__being__ singing

Be, *have*, and *do* are the most irregular verbs in English. Their standard English forms are listed below in Tables 7.

a. BE		Present		Past	
		Singular	Plural	Singular	Plural
Person	1	am	are	was	were
	2	are	are	were	were
	3	is	are	was	were

Past participle (Ven form)	been
Present participle (Ving form)	being
Gerund (Ving form)	being

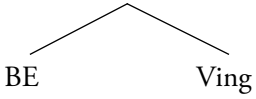
b. HAVE	Present	
	Third person singular	has
	All other persons and numbers	have
	Past	
	All persons and numbers	had

	Past participle (Ven form)	had
	Present participle (Ving form)	having
	Gerund (Ving form)	having
c. DO	Present	
	Third person singular	does
	All other persons and numbers	do
	Past	
	All persons and numbers	did
	Past participle (Ven form)	done
	Present participle (Ving form)	doing
	Gerund (Ving form)	doing

TABLE 7: FORMS OF *BE*, *HAVE*, AND *DO*

Auxiliary *be* will always follow auxiliary *have* when they occur together in the same clause. Whichever verb follows progressive *be* assumes its present participle form, Ving. Our formula is BE + Ving, and the syntactic structure corresponding to this is:

(55)



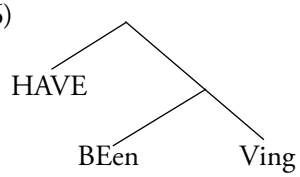
Exercise

Using (a) as a model, identify the two elements of the progressive in each of the following sentences:

a. The students *were* act*ing* out.
b. Everyone was talking during class.
c. Ted and Sheila are getting divorced.
d. Sheila and Roger are planning to elope.
e. Ted is feeling blue.
f. Their friends are acting surprised.

When perfective *have* and progressive *be* occur together in a clause, (1) *have* precedes *be*; (2) *be*, as the verb immediately to the right of *have*, occurs as a *been*; and (3) the verb immediately to the right of progressive *be* occurs as Ving. The associated syntactic structure is:

(56)



Exercise

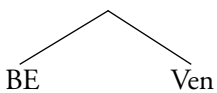
Using (a) as a model, identify and distinguish the elements of the perfect and the progressive in each of the following sentences:

a. I **have** <u>be</u>**en** search<u>ing</u> for that for ages. (Bold = perfect; underlined = progressive)
b. We had all been hoping for better weather.
c. Eleanor has been dating JD for several months now.
d. JD has been seeing a physical therapist for his damaged knee.
e. The plants have been doing better since you started talking to them.
f. My computer has been crashing a lot lately.

Like *have*, *be* may serve as a main verb. When it does, as in *Wiggles **is** a friendly boa*, it is a **linking** verb. When two instances of *be* occur, the same generalization holds as for *have*—the first is an auxiliary (as in *Wiggles **is** being affectionate*) and the second is the head verb.

The auxiliary *be* is a bit more complex than auxiliary *have* because it also occurs in the passive. The functional formula for the passive is Be + Ven, and the corresponding syntactic structure is:

(57)



Exercise

Using (a) as a model, identify the two elements of the passive in each of the following sentences:

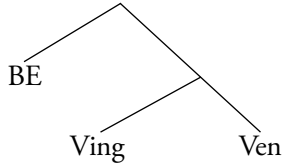
a. This book *was* writt*en* by a nice derangement of linguists.
b. The current global warming was predicted by scientists almost fifty years ago.
c. The Mona Lisa was painted by Leonardo da Vinci.
d. Global warming is caused by excessive hydrocarbon use.
e. Passive sentences are marked by a form of *be* and a verb in its past participle form.
f. Movies are intended to communicate ideologies.

Can the passive *be* occur with the progressive *be*? Sentence (58) shows that it can:

(58) That song is being sung poorly.

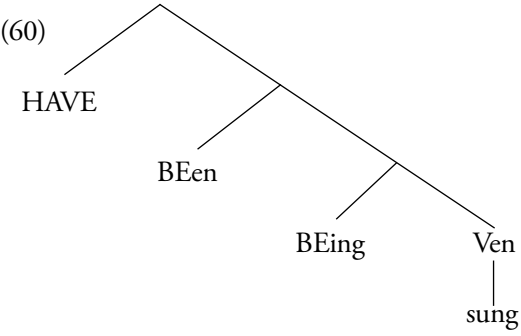
(58) also shows that the passive *be* follows the progressive *be*. We can represent the structure of the verb phrase in (58) as:

(59)



Finally, we can combine all of the auxiliaries above into a single verb phrase. Can you think of what such a verb phrase might be? Let's look at it structurally:

(60)



To imagine such an ungainly (but grammatical) verb phrase in a sentence, consider (61), which denotes either the singing of one extremely long song or repetitious performances of the same song.

(61) That song has been being sung for hours, and I'm sick of it.

Exercise

Using (a) as a model, identify and distinguish the elements of the perfect, the progressive, and the passive in each of the following sentences:

a. Actors **have** *be***en** be*ing* nominated for Oscars for over fifty years now. (Bold = perfect; italics = progressive; underlined = passive)
b. Time and energy have been being wasted on that project for a long time.
c. The children must not have been being well cared for.
d. The parents should have been being monitored all along.
e. Administration policy hasn't been being properly scrutinized by Congress.
f. Air travelers from the Middle East have been being harassed by security officers since 9/11.

A note on Do

Do, the last auxiliary, is something of an exception, as the sentences below suggest:

(62) a. Jason does not/doesn't sing.
b. Does Jason sing?
c. Jason DOES sing.
d.*Jason may do sing.
e.*Jason do may sing.
f. *Jason is doing sing.
g. *Jason does be singing. (grammatical in some dialects of English)
h.*Jason has done sing.
i. *Jason does have sing.
j. *Jason is done sing.
k.*Jason does be sung.

What can we learn from this odd pattern of sentences? First, when *do* occurs

with a main verb, that verb is in its base (V) form, represented by the formula DO + V. Second, *do* cannot occur with any of the other auxiliaries, either before or after them. Third, *do* may occur when the main verb is negated by *not* or *n't* (62a), in a question (62b), or in an emphatic sentence (62c).

Fourth, the auxiliary *do* differs from the **Pro-Verb Phrase** *do*. Consider sentence (63).

(63) Did[1] she do[2] so too?

In this example, *Did*[1] is an auxiliary, while *do*[2] *so* acts as a Pro-Verb Phrase, an expression that substitutes for a verb phrase.

Auxiliary *do* and main verb *do* also differ, as the fact that they can co-occur shows: [$_{\text{Aux}}$*Did*] *you* [$_{\text{MV}}$ *do*] *the dishes?*

One handy test for identifying VPs is the **Do-So Test**. One simple application of this test is to substitute *do so* for the VP (ensuring that the tense of *do* matches that of the original VP):

(64) a. The zombies *did so*. (= 51a)
b. Hector is *doing so*. (= 51b)
c. Hector has never *done so*. (= 51c)
d. Hector does not *do so*. (= 51d)
e. Hector has been *doing so*. (= 51e)

In another version of this test, the sentence in question is coordinated with one similar to it; in this case the elements reverse to form *so do*:

(65) a. Hector juggles and *so does* Zenobia.
b. All the employees agree and *so does* their supervisor.
c. The lemmings jumped and *so did* the zoologists.

In short, the expressions *do so* and *so do* replace a VP, including its objects, complements, and modifiers, but excluding negation and auxiliaries.

Exercise

In the sentences below, draw brackets around the main verb. Draw formulas or trees similar to those used in the preceding section to describe the structure of the auxiliaries + main verb.

a. I have bought all my textbooks for next semester.
b. I have a few dollars for fun.

c. Sylvia has been doing a lot of work lately.
d. Of course we are being ironic.
e. Zelda was congratulated for her good work.
f. The job has been completed.

VP: head + object(s)/complement

A phrase that obligatorily follows a verb head is called an **object** or **complement**. These terms are sometimes interchangeable, although tradition has tended to attach "object" to some constructions and "complement" to others. The reasons for the variation are obscure. The label "object" dimly suggests the goal or purpose of the verb head, though neither of these semantic labels applies to every structure so labeled. The term "complement" suggests the notion of completing (hence the spelling) the verb in some way. Table 8 lists the four main types of objects and complements.

TYPE	EXAMPLE
Direct Object	The Vikings demanded [*tribute* (NP)].
Indirect Object	Waldo gave [*his sister* (NP)] a dictionary.
PP Complement	Waldo gave a dictionary [*to his sister* (PP)]
Subject Complement	Freud was [*a prude* (NP)]/[*prudish* (AP)].
Object Complement	I consider Jung [*a quack* (NP)]/[*unreliable* (AP)].
Sentence Complement	I realize [*that tests should be easier* (S)].

TABLE 8: OBJECTS AND COMPLEMENTS OF VERBS

Table 8 reveals that NPs can serve any object or complement function, that adjective phrases can also act in complement functions, and that an entire clause or sentence can act as the complement of certain verbs.

An important grammatical notion associated with the direct object is that of **transitivity**. A **transitive verb** takes a direct object; an **intransitive verb** does not. Thus the sentences (66a-d) contain transitive verbs and those in (67a-d) contain intransitive verbs. The direct objects in (66) are italicized.

(66) a. Moriarty eluded *Sherlock*.
b. Everyone avoided *me*.
c. Sarah gave him *some good advice*.
d. I consider *Jung* a quack/unreliable.

(67) a. We walked.

b. Smoke rises.
c. Harrison confessed.
d. Everyone in the room laughed.

In English, a large number of verbs can be either transitive or intransitive, sometimes with a considerable difference of meaning:

(68) a. The fire smoked.
b. Shelley smoked. (Ambiguous)
c. Shelley smoked the salmon.

Thus whether such verbs are transitive or intransitive can only be determined by their use in an actual clause. One simple test is that an intransitive verb can potentially end a complete clause, as in (67).

Two structures require not one but two phrases to follow the verb. The indirect object construction, e.g., (66c), typically calls for a direct object also. Verbs that enter into such constructions are said to be **bitransitive** or **ditransitive**. The object complement construction (e.g., (66d)) requires a direct object preceding the complement. We deal in more detail with these constructions in our chapter on Basic Clause Patterns.

Verbs with objects may imply end products and/or bounded activities:

(69) a. He built a workbench.
b. He builds workbenches.

(69a) implies that a workbench came into being as a result of the building; it also views the workbench building event as having an end point, namely the completion of the workbench. (69b) is in the simple present tense and represents multiple, discrete, workbench building events, as the plural, *workbenches*, makes clear. In this respect, it is like a punctual verb, such as *cough*, *punch*, or *kick*.

Verbs without objects often imply no natural end-point. Compare (70a) with (70b):

(70) a. She ran.
b. She ran a marathon.

(70a) implies no particular end to the running; in fact, it is compatible with *and she's still running*. (70b), on the other hand, looks at the marathon-running as a single event with a natural completion, namely, the end of the marathon.

The simple present version of (70b), *She runs marathons*, implies multiple individual marathon-running events. Note the plural, *marathons*.

Verbs allow or select complements of various syntactic forms. For instance, when *wait* is transitive, its complement may be either an NP (e.g., *Wait your turn!*) or a PP (e.g., *We'll wait for the next bus*). Anyone learning the language must learn the restrictions and possibilities associated with verbs.

Exercise

Using (a) as a guide, identify and distinguish the various objects and complements in the following sentences. Be sure to identify the entire object/complement expression in each instance.

a. The people elected Oscar (Direct Object) poet laureate (Object Complement).
b. She must be really intelligent.
c. Her daughter became a famous scientist.
d. Fred smokes cigarillos.
e. The students gave the new teacher a welcome gift.
f. The class named Rodriguez "classmate most likely to succeed."
g. Many people believe that James Joyce was the greatest novelist of the 20th century.

VP: head + modifier(s)

To distinguish them from modifiers of nouns, modifiers of verbs often have special names such as **adverbial**. The most frequent modifiers come in only four formal types, as indicated in Table 9.

TYPE OF MODIFIER	EXAMPLE
Adverb phrase	We left *early*.
Prepositional phrase	We stayed *in Helsinki*.
Adverbial clause	We left *after it started to snow*.
Noun phrase	We enjoyed it *a great deal*.

TABLE 9: MODIFIERS OF VERBS

Adverbial clauses begin with the subordinating adverbial conjunctions mentioned in the chapter on Minor Parts of Speech.

Like single adverbs, the phrasal and clausal modifiers are somewhat movable in the sentence:

(71) a. We *eagerly* waited for our turn.
b. *After it began to snow*, we left.

Sometimes a short (1-2 word) adverbial will appear within the verb phrase:

(72) a. We do *occasionally* eat out.
b. She must have *often* donated her legal services.

Noun phrase adverbials, such as *a lot* in (73a), may be confused with direct objects. However, they will never become the subject of a corresponding passive sentence, as the ungrammaticality of (73b) shows:

(73) a. Harry entertains *a lot*.
b. **A lot* is entertained by Harry.

The adverbials that modify verbs can be grouped semantically according to the semantic roles that they express. The most common appear in Table 10. These roles should remind you of the meanings associated with adverbs and prepositions listed in our chapters on Major and Minor Parts of Speech.

SEMANTIC ROLE	EXAMPLES
Time	He left *early*.
	We left *on Monday*.
	I'll leave *when the moon turns green*.
Place	She stopped *there*.
	She relaxed *on the sofa*.
	She stopped *where the victim was found*.
Manner	The troupe exited *gracefully*.
	The troupe exited *with grace*.
Reason	He left *out of spite*.
	He left *because he was miffed*.
Purpose	He left *to milk the cow*.

TABLE 10: SOME SEMANTIC ROLES OF ADVERBIALS

Exercise

Draw brackets around each VP in the sentences below. Underline the headword and indicate the type of object, complement, or modifier that accompanies the headword.

a. Angela offered the job to her former rival.
b. Angela offered Archie the job.
c. We left for Austin in the morning.
d. In the morning, we left San Antonio for Austin.
e. Your proposal seems quite reasonable.
f. Eat this, if you dare.

Complex VPs: combinations of functions

Though we have illustrated separately each of the functions accompanying the verb head, the options in the formula stated at the beginning of this section allow for more than one function to appear with the verb. Consider, for example, the sentences in (74).

(74) a. She *has been speaking for three hours*.
(auxiliaries + head + PP-modifier)
b. Scott *offered Zelda a ride since her car was out of gas*.
(head + indirect object + direct object + adverbial clause modifier)
c. Hortense *never becomes angry*.
(adverb phrase + head + AP-subject complement)
d. The remains *will be shipped to Cleveland on Wednesday*.
(auxiliaries + head + PP-modifier + PP-modifier)

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GLOSSARY

ADJECTIVE PHRASE:phrase headed by adjective.
ADVERB PHRASE: phrase headed by adverb.
ADVERBIAL: an expression that functions like an adverb phrase, namely as a modifier of a verb, verb phrase, adjective, adverb, clause, or sentence.
APPOSITIVE NOUN PHRASE: NP that occurs as a "parenthetical aside" after its head noun.
AUXILIARY VERB (also called **AUX** or **HELPING VERB**): verb that accompanies a main verb in a clause.
BITRANSITIVE (also called **DITRANSITIVE**): verb phrase having a direct and an indirect object.
COMPLEMENT: one expression that grammatically completes another.
DEGREE ADVERB: adverb indicating the extent to which an adjective or adverb applies.
DITRANSITIVE: See **BITRANSITIVE.**
DO-SO TEST: a substitution test used to identify a verb phrase.
EMBED: to include one structure inside another structure.
FINITE: a clause whose verb is marked as present or past tense or which contains a modal. See **NON-FINITE.**
FUNCTION: role played by one expression in another.
GERUND: a non-finite verbal phrase whose first verb is in its Ving form and which functions in the range of NPs.
HELPING VERB: See **AUXILIARY VERB.**
INFINITIVE: a non-finite verbal phrase that functions in the range of NPs, modifiers, or complements.
INTENSIFIER: member of a small word class which intensifies the meaning of its head word.
INTRANSITIVE: verb that cannot take a direct object.
LOGICAL SUBJECT: in traditional grammar, a word or phrase referring to either the agent of an action or the understood subject of a sentence.
MODAL AUXILIARY: one of the auxiliaries *will*, *would*, *can*, *could*, *shall*, *should*, *may*, *might* and *must*.
NON-FINITE: a clause which is not marked for tense nor includes a modal. See **FINITE.**
NOUN MODIFIER: a noun that modifies a head noun.

NOUN PHRASE: phrase headed by a noun.
OBJECT: NP in VP required by transitive or bitransitive verb.
OBJECT OF A PREPOSITION: a noun phrase required by a preposition in a prepositional phrase.
PARTICIPLE: a verbal phrase whose first verb is Ven or Ving and which functions as a pre- or post-modifier in an NP.
PASSIVE TEST: a test used to determine the object of an active clause by making it passive.
PHRASE: a grammatical unit containing a head word and any complements or modifies.
PREPOSITIONAL PHRASE: phrase headed by a preposition.
PRO-SUB TEST: a test used to identify a noun phrase by substituting a pronoun for it.
PRO-VERB PHRASE: a form such as *do so* that replaces a verb phrase.
TOPICALIZATION TEST: a test used to determine whether a structure is a phrase by moving it to the beginning of its sentence.
TRANSITIVE: verb that requires a direct object.
VERB PHRASE: a phrase headed by a verb.
VERBAL PHRASE: a non-finite verb phrase that functions in ways other than as the predicate of a finite clause. See **GERUND**, **INFINITIVE**, **PARTICIPLE**.
WH-QUESTION TEST: a test to identify a noun phrase by replacing it with a wh-question word and then recasting the sentence that contains it as a question.
WHIZ-TEST: a test to identify a noun phrase with a head + postmodifier structure by inserting *who* or *which* plus a form of the verb *be* after the presumed head word.

10 Basic Clause Patterns

KEY CONCEPTS
Clause elements: subjects, predicates
Subjects
Semantic roles
Auxiliary verbs
Tense and aspect
Basic clause patterns
Appendix: time and tense

INTRODUCTION

Until now, we have examined the grammar of English in bits and pieces—phonemes, morphemes, words, and phrases. In this chapter, we put these pieces together into the basic grammatical structure of language—the clause. Clauses are basic for several reasons. First, you need only one of them to make a sentence, though, of course, sentences may consist of an indefinite number of clauses. Second, in actual communication, shorter utterances are usually reconstructed and understood by reference to clauses. For instance, *over here* might be understood as *I'm over here* or *Shine the light over here*. The grammatical importance of clauses probably reflects the fact that the clause most directly represents the most fundamental structure of meaning—the proposition (a description of a state of affairs whose truth may be asserted, questioned, or otherwise manipulated). It doesn't make much sense to say that a clause represents a complete thought, as school grammars often do, unless we know what a complete thought is. A proposition is the best model of a complete thought (whatever it is) that we have. For the present, we will proceed on the assumption that the sense of clausehood is intuitive, based on our competence as native speakers and perhaps on our status as human makers of meaning, although students may need practice in identifying clauses.

Of the many reasons why we should know about clauses, we'll briefly discuss just four. First, clauses are an important punctuation unit. When a clause constitutes a whole sentence, in written English it must begin with a capital letter and end in a period or its equivalent. When multiple clauses combine to constitute a sentence, the individual clauses may require special punctuation, such as separation by commas. Certainly, the single-clause sentence is the best unit to begin teaching punctuation with.

Second, and relatedly, writing teachers are concerned about sentence fragments, that is, non-sentential units improperly punctuated as sentential

units. As we noted earlier, fragments are typically internally grammatical, that is, they are well-formed phrases or clauses. Students must learn the differences between clauses and their constituent units and between clauses and sentences in order to learn to punctuate appropriately.

Third, a developed writing style requires control of a range of sentence types, from sentences with just a single clause through sentences with an indefinite number of clauses. A traditional technique for helping student writers expand their repertoires is sentence combining, or more accurately, clause combining. Teachers wishing to create clause combining exercises for their students must know about clauses, especially if they want to tailor the exercises to their students' actual needs.

Fourth, an important aspect of standard English grammar is subject-verb agreement. That is, the subject and verb of a clause must grammatically agree with each other in person and number. In order to be able to teach subject-verb agreement, teachers must know about subjects, verbs, and clauses. And, while the general agreement principle is quite simple, it is quite intricate in its details (which we deal with in our chapter on Usage in Book II).

In this chapter we first examine the internal organization of clauses. Next we discuss the subject function, illustrating the use of formal characteristics to identify it. We then discuss the **semantic roles** subjects and other phrases may play in clauses. The main part of the chapter provides details on seven major clause patterns in the language.

ELEMENTS OF THE CLAUSE

The basic functional analysis of a clause is very simple:

(1) A clause is a grammatical unit that contains a subject and a predicate.

That's all. Only a subject and a predicate are needed. No less than a subject and a predicate will do. (Recall our discussion of necessary and sufficient conditions!) According to this definition all of the expressions in (2) are clauses. (Subjects are italicized; predicates are bolded.)

(2) a. *Birds* **twittered**.
b. *All the birds of the neighborhood* **congregated in the venerable elms in the park**.
c. that *no one* **approves of the decision**
d. **which** *I* **lost**

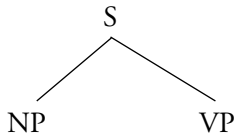
e. **whenever** *the phone* **rings**

Traditional (Reed/Kellogg) sentence diagramming represents the functional subject/predicate relationship, as in (3).

(3) Head of subject | head of predicate
Birds | twittered

Structural diagrams represent the basic elements of clauses, as in (4).

(4)



S is the abbreviation for "sentence," and is the category/part of speech label for both clauses and sentences. The tree (4) is generated by the phrase structure rule (4a).

(4) a. S → NP VP

This says that the category S is composed of an NP followed by a VP. The constituents of NPs and VPs are discussed in our chapter on Phrases. The NP in (4) functions as the subject of its clause while the VP functions as the predicate. We deal with subjects in our Subjects section and with predicates in our Basic Clause Patterns section later in this chapter. As we go along, we will introduce complexities to the diagramming systems as needed.

In contrast to the expressions in (2), those in (5) are not clauses.

(5) a. twittered
b. all the birds of the neighborhood
c. approves of the decision
d. over here
e. when in the course of human events

The fact that a group of words has a certain length or can be understood in some context is inadequate to define a clause. (5b), for example, contains more words than (2a,d, or e). Likewise, *over here* can be understood if one imagines a context.

Clause patterns provide the basic skeletons of English sentences. Full sentences consist of clause patterns either minimally or extensively devel-

oped—through expansion of their component phrases and/or by including more than one clause.

In the following pages, we will consider first the subject function in ways that will apply to all basic clause patterns. We will indicate the fundamental forms of subjects and then their meanings, stated in terms of **semantic roles**.

We will then turn to the various types of predicates, pointing out their functional and formal characteristics. Since different patterns have differing types of objects and complements, we will describe each pattern in a way that expands slightly on the simple subject + predicate division.

SUBJECTS

The traditional definition of subject is "what the sentence is about," (a.k.a. the **topic** of the sentence). A traditional grammarian would say that sentence (6) is about *Oscar*.

(6) Oscar willed Elmer his worm-farm.

What it says about him is that he willed Elmer his worm-farm. Predicates, from a traditional point of view, complete a sentence by saying something about its subject. This function is sometimes referred to as the **comment** of the sentence.

Subjects tend to refer to entities that are assumed to be already familiar to the hearer; they often represent what has been variously referred to as "known," "old," or "given" information. Predicates generally contain the "new" information in a sentence. The traditional definition of subject is neither a formal, functional, nor semantic one. Rather, it defines a subject in terms of how the sentence in which it appears relates to the ongoing play of meaning in a discourse. Unfortunately, unless we have a way to accurately identify what a sentence is about, this definition is unusable. And even when we can reliably identify what a sentence is about, the definition may give incorrect results, as in (7):

(7) And speaking of subjects, we should identify them formally.

In (7), given the appropriate context, we might argue that *And speaking of* is a marker of topichood and so the topic of (7) is the phrase *subjects*, though *subjects* is not the subject of the sentence.

The shift from grammar to discourse is particularly serious when we look at more complicated sentences, such as (8).

(8) Whenever you feel like raking those leaves, go ahead and do it, because I won't rake them.

What is the topic of this sentence? Raking the leaves? If so, it isn't a subject. If only subjects can qualify as topics, then either *you* or *I* or both must be its topics. Can a sentence have two topics? The traditional definition doesn't say. Is every subject a topic? The traditional definition doesn't say. If every subject is not a topic, how do you identify the topic? The traditional definition doesn't say. In short, one cannot identify topics of sentences out of context, and when we examine sentences in context, the topics may well turn out not to be subjects. Thus the traditional discourse-based criterion for establishing a grammatical category reflects a mistaken notion of grammatical criteria. And it just doesn't work.

Exercise

Using only the traditional definition of subject, try to identify the *whole* subjects of the following sentences:

a. Oscar closed the door.
b. Amanda helped herself to the nectarines.
c. One usually takes a long time to recover from a back injury.
d. No one understands me.
e. Advantage was taken of the loophole by the cabinet ministers.
f. It is clear that power breeds corruption.
g. It rained yesterday.
h. There will be more rain tomorrow.

What kinds of problems did you run into? Besides the definition, what assumptions did you have to make?

Identifying a subject

In this section we present a formal characterization of subject to replace the definition based on discourse function. We can provide a more accurate and more general characterization by using the position, agreement patterns, and case markings of subjects in clauses. Consider the following sentences:

(9) a. I am at home.
b. You are at home.
c. He/she/it is at home.
d. We/you/they are at home.

There would be universal agreement that the subjects of the clauses in (9) are the pronouns, *I*, *you*, etc. From these simple clauses we can derive a general pattern, namely that an English subject typically occurs more or less immediately *before* the verb of its clause.

Exercise

Using only the fact that an English subject occurs more or less immediately before the verb(s) of its clause, identify the whole subject of each of the following sentences:

a. Oscar made most of the children laugh most of the time.
b. Many deer are killed on the roads each year.
c. It is raining.
d. In spite of his stature, Tom Thumb ran for election to high office.
e. As for TV bloopers, they should be left on the cutting room floor.
f. Bill, with great skill and daring, quickly extricated himself from the web of intrigue.
g. Rarely have I been so disgusted.
h. There are a number of rhetorical problems here.

What problems did you run into, and how did you solve them?

From our discussion of pronouns in our chapter on Minor Parts of Speech, we hope you remember that pronouns, if they replace anything, replace entire noun phrases. It follows that if we replace the pronouns in (9) with more complex NPs, then those more complex NPs (bolded) must also be the subjects of their clauses.

(10) a. **Olive** is at home.
b. **Olive and Popeye** are at home.
c. **The one you're looking for** is at home.
d. **All the little children** are at home.

Many school grammars, writing manuals, and composition textbooks identify the head of the subject phrase as the subject of the clause. Some texts are more careful and distinguish the **simple subject** from the whole subject. By simple subject they mean the head of the subject phrase. Logically, however, if a pronoun is the subject of a clause, then any expression, regardless of how complex, that replaces the pronoun must also be the sub-

ject of that clause. We will follow the practice of linguists: when we speak of the subject of a clause, we mean the entire subject. If we wish to refer to the head of the subject, then we will speak of the head of subject. We will not use the terms simple subject nor will we ever use the term subject to refer just to head of the subject. Similar remarks apply to predicates, objects, complements, and modifiers. So, please, when we ask you to identify the subject, object, etc. in an expression, identify the entire phrase, not just its head word.

Notice now that as we changed the subject of the clauses in (9), we also changed the form of the verb. Thus, *I* goes with *am*; *we/you/they* with *are*; *he/she/it* with *is*. When two (or more) parts of an expression are mutually dependent in this way they are said to **agree** with each other; that is, when one is altered the other must also be altered.

Notice too that in order to create grammatical sentences our subjects *must* agree with their verbs. If they don't, the resulting strings of words are not well-formed standard English sentences:

(11) a. *I is at home. (grammatical in some varieties)
b. *We/you/they am at home.
c. *He/she/it are at home.

The verb *be* is the most morphologically complex verb in English. It has more forms than other verbs (see the chart in our chapter on Phrases), and so shows the agreement between subject and verb most clearly. But a reduced version of this agreement pattern can be seen also in other verbs:

(12) a. I/you/we/they/Bill and Molly *like* rutabagas.
b. He/she/it/Fred *like**s*** rutabagas.

Most verbs have only two forms in the present tense, one that ends in *-s* and another that has no ending. The *-s* form occurs with third person singular subjects. The uninflected form occurs with all other subjects. So, in general, English subjects must agree with their verbs, as well as occur before them.

We can use these characteristics of subjects to determine just which of several phrases in a clause is its subject. Suppose, for example, that we have a sentence in the past tense with several NPs in it, and we wish to decide just which of these is the subject. Now, the *-s* marker does not occur in the past tense; there are no verbs of the form **likeds* in English, and, except for *be*, the English past tense shows no indication of agreement. So to observe the

agreement pattern we must change the past tense verb to the present tense. Then we can systematically change the NPs in the sentence and observe whether we must also change the verb. When we find the one (and there will be only one) NP that forces us to change the verb in order to create a grammatical sentence, we will have found the subject of the sentence. Consider:

(13) a. I liked your poem.

Change (13a) to present tense:

(13) b. I like your poem.

Remember that only a third person singular subject requires the *-s* ending on the verb. Note that *your poem* is third person. If *your poem* were the subject, the verb would be *likes*. Therefore *your poem* is not the subject. *I* is not third person singular, but if we change it to *She* we have to change the verb to *likes* to maintain grammaticality.

(13) c. She likes your poem.

We can conclude that *She* is the subject of (13c), and because *She* replaced *I* in (13b), *I* must be the subject of (13b) and also of (13a).

Exercise

Using only subject-verb agreement (that is, change the NPs and observe whether the verb form must also change), identify the whole subject in each of the following sentences.

a. He eats a bagel every morning.
b. She sees her dentist at least twice a year.
c. Gasoline costs a fortune these days.
d. He sent his mother flowers for Mother's Day.
e. Chickens cross roads.
f. There are several cookies in the box.
g. It is raining.

What problems did you encounter? How did you solve them?

Another way to determine the subject of a sentence is to replace all its NPs with pronouns. The NP that can only be replaced by a pronoun in the **nomi-**

native case form will be the subject. Thus:

(14) a. The man handed the child to the girl.

When we replace each NP with an appropriate pronoun we get:

(14) b. He handed him to her.

The only nominative pronoun is *he*, which replaced *the man*, so *the man* must be the subject of (14a).

Exercise

Using only the case of pronouns, identify the whole subject of each of the following sentences:

a. Oscar lies beautifully.
b. Oscar wrote searingly witty plays.
c. Mary sent her sister to the movies.
d. The books, Mary put on the shelves.
e. Our bikes were stolen by the Over-the-Hill Gang.
f. It is raining.

What problems did you encounter? How did you solve them?

It is important to have a variety of ways of identifying subjects, because it is not always easy to identify them in a specific sentence. For example, more than one NP may occur before the verb in a sentence:

(15) Bill, Fred likes.

This is called a **topicalized** sentence. The first NP, *Bill*, is not the subject, as we can see by substituting pronouns and observing their case markings:

(16) a. Him, he likes.
b.*He, he likes.
c.*He, him likes.
d.*Him, him likes.

(16a) is the only grammatical reformulation of (15), and as *he* is the only nominative pronoun, it must be the subject of (16a); and as it is *Fred* that is

replaced by the nominative pronoun, *Fred* must be the subject of (15).

Fred is also the subject by the agreement test. If we replace *Fred* by a first person form, we are forced to change the verb to *like*. This does not happen if we change *Bill* to a first person form.

(17) a. Bill, I like.
b.*Bill, I likes.
(18) a. Me, Fred likes.
b.*Me, Fred like.

As we noted elsewhere, the more tests we have to support an analysis, the more confident we can be in that analysis, and it is especially satisfying when all the tests give the same result.

Exercise

For each of the following sentences, identify its (entire) subject, using whichever of our criteria are most appropriate and convincing:

a An afternoon nap is a must.
b. My bookstore just ran out of comics.
c. In the beginning, there was chaos.
d. Things aren't any better now.
e. Bill seems to have gone ahead.
f. Margaret has been awarded a fellowship.
g. There is a house in New Orleans.
h. It was a blast.
i. It was Jack that built the house.

What criteria did you use in each case? What problems did you encounter? How did you solve them?

SEMANTIC ROLES

Now that we have developed ways to identify the subject of a clause, let's examine another traditional definition of subject: the subject represents the doer of the action. This characterization sometimes helps:

(19) a. *The eagle* swallowed a trout.
b. *Jesse* dismissed her campaign manager.
c. *Abercrombie* embezzled $1,000,000.

However, as a general characterization of the subject, it will not do. We saw in our chapter on Major Parts of Speech that not all verbs denote actions. For example, *be*, *belong*, *become*, *seem*, *ache*, *know*, and *own* denote states. How then can we use the definition to identify the subjects in (20)?

(20) a. *That sculpture* belongs to the Art Institute.
b. *Egworm* seems moody today.
c. *My sinuses* ache.
d. *Who* owns the earth?

The situation is even more complex than this, because even verbs that do denote actions may have subjects that do not denote the doer of that action (assuming that a doer is a person or at least an animate entity that does something):

(21) a. *The keys* opened the door.
b. *Fred* received a letter from the IRS.
c. *The storm* knocked out the power lines.
d. *The heavy oaken door* opened silently.

In this section, we define a set of terms developed by linguists to describe the **semantic** roles of subjects, as well as of objects and other phrases in clauses. Consider the sentences:

(22) a. John broke the windshield.
b. John approached Mary.

John is the subject of both sentences in (22), and in traditional grammar would have been defined as the "doer" of the actions of breaking the windshield or approaching Mary. Glossing the subject in this way is an attempt to provide a general statement of the semantic relation between the subject and the verb in an indefinite number of sentences. Modern linguists have attempted to give a more precise characterization of this relationship. They would say that *John* is the **Agent** of these two sentences. Agent is defined as *the animate instigator of the action denoted by a verb*.

The term Agent contrasts with other terms in a set of semantic roles that may be assigned to subjects and other grammatical relations. Compare the sentences of (22) with the sentences of (23):

(23) a. The hail broke the windshield.

b. The wind knocked down the power lines.

In (23a), *The hail* cannot be the Agent of the action denoted by the verb. This is because hail is inanimate, and so cannot be agentive by our definition. We will refer to *the inanimate cause of an event* as the **Force**. While a Force cannot be animate, it must have its own potency.

To insist on distinguishing Agent from Force is not to play a mere terminological game lacking empirical consequences. To appreciate the difference between Agent and Force in sentences (22) and (23), consider what happens when we add adverbs of willfulness to the sentences.

(24) a. John deliberately broke the windshield.
b. John deliberately approached Mary.
(25) a.*The hail deliberately broke the windshield.
b.*The wind deliberately knocked down the power lines.

(24a,b) are perfectly innocuous sentences requiring no special interpretation. (25a,b), on the other hand, can only be interpreted if we personify hail and wind.

Consider now:

(26) John is in the kitchen.

In (26), *John*, although animate, is in no sense the "doer" or instigator of an action, and therefore is not an Agent. We will refer to the semantic relationship that *John* bears in (26) as the **Theme** of the sentence. *Theme is the NP referring to the entity whose movement, existence, location, or state is predicated*. For example, the italicized phrases below are Themes:

(27) a. *The balloon* floated into the sky.
b. *The king* is in his counting house.
c. *Elves* no longer exist.
d. *Frederika* is very tall.

The movement or location may be metaphorical:

(28) a. *Harold* went from bad to worse.
b. *Susan* is in a foul mood.
c. *Leslie* weighs 145 lbs.

Consider now the roles played by the italicized noun phrases in:

(29) *John* is currently in *Turkey* walking along *the Dardanelles* on his way from *Pakistan* to *Malta*.

Here *John* is the Theme, as it refers to the entity whose movement is in question; *Turkey* is his **Location**; *the Dardanelles* is his **Path**; *Pakistan* is his **Source**; and *Malta* is his **Goal**.

The Path role is played by *the NP referring to the route along which the referent of the Theme moves*. For example:

(30) We left by *the rear entrance*.

The Location role is played by *the phrase that designates the place or state at or in which the referent of the Theme is at a particular time*. For example:

(31) John is in *bed*/in *Boston*/in *a foul humor*/in *his evening wear*.

The Source role is played by *the phrase indicating the location from which the referent of the Theme moves*.

(32) We took the candy from *the baby*.

The Goal role is played by *the phrase that indicates the place or state to which the referent of the Theme moves*.

(33) We sent it to *the Pentagon*.

(34)

	Source	**Goal**
John went from	New York	to New Orleans.
	his bed	his bath
	silly	serious

The **Time** role is played by *a phrase indicating when a situation occurred*:

(35) a. Let's meet at *midnight*.
b. At *dawn* the generals led their armies out to battle.

Other semantic roles include:

Experiencer: *the animate entity inwardly or psychologically affected by the event or state*.

(36) a. *Henry* knows all the answers.
b. *We all* feel the pain of loneliness occasionally.

Stimulus: *the cause of an experiencer's psychological state*.

(37) a. Jack likes *Turkey Giblets*.
b. Alan is afraid of *spiders*.

Patient: *the animate entity physically affected by the state or event*.

(38) a. The speeding car struck *Bill* a glancing blow.
b. The surgeons operated on *her* for several hours.

Instrument: *the object with which an act is accomplished*. Instruments are usually inanimate and lack their own potency:

(39) a. John opened the door with *the crowbar*.
b. *The crowbar* opened the door.

Recipient: *the animate being who is the (intended) receiver of the referent of the Theme*.

(40) a. Some students give *teachers* gifts.
b. *Teachers* sometimes get gifts from their students.

Benefactive: *the animate being affected (positively or negatively) by the occurrence denoted by the verb*.

(41) a. I cut the grass for *my grandmother*.
b. I baked *Sandy* a birthday cake.

Effected/Factitive: *the entity that comes into existence by virtue of the event denoted by the clause*.

(42) a. Frankenstein created *a monster*.
b. Those two wrote *this book*.

Attribute: *a status, property, or characteristic ascribed to some entity*.

(43) a. Bullwinkle is *the game warden*.
b. The people elected Barack Obama *President of the US.*

The game warden is a status ascribed to Bullwinkle by virtue of the state of being denoted by *is* in (43a), and *President of the US* is attributed to *Barack Obama* by virtue of *elected* in (43b).

Empty/Expletive: *a phrase that does not refer to anything*.

(44) a. *It* is snowing.
b. *It* is six p.m.
c. I would appreciate *it* if you turned down the music.
d. *There* are a number of issues to be considered.

Typically, NPs with Empty semantic roles are either *it* or *there*. Because they are semantically vacuous, these NPs cannot sensibly be questioned:

(45) a. *What is snowing?
b. *What is six p.m.?
c. *What would you appreciate if I turned down the music?
d. *Where/what are a number of issues to be considered?

Let's look now at the kinds of semantic roles that subjects can play. Subjects can play most, if not all, of the roles we have mentioned.

(46) a. *The horse* bucked the rider. (AGENT)
b. *The storm* knocked out the phone lines. (FORCE)
c. *The rider* felt the pain. (EXPERIENCER)
d. *Spiders* freak me out. (STIMULUS)
e. *He* underwent a heart transplant. (PATIENT)
f. *Fred* is the strongest candidate. (THEME)
g. *This key* opens the strongbox. (INSTRUMENT)
h. *Fred* got a birthday kiss from his mom. (RECIPIENT)
i. *Oscar* had his own cake made for him. (BENEFACTIVE)
j. *Man* evolved from apes. (FACTITIVE)
k. *Texas* is where the best hotsauce comes from. (SOURCE)
l. *Colorado* is where we're going. (GOAL)
m. *Spain* is where the rain falls. (LOCATION)

n. *Today* is the last day to register. (TIME)
o. *It* is raining. (EMPTY)

Exercise

Using (a) as a model, identify the (whole) subject and then its semantic role in each of the following sentences:

a. [Macmillan] gave his wife a ring. AGENT
b. The ring was delivered by a liveried messenger.
c. It had been crafted by a skilled goldsmith.
d. Lightning causes forest fires.
e. Carelessness causes injuries.
f. Plastic is derived from petroleum.
g. There are only a few good tickets left.
h. This project cost me a great deal of time.

What problems did you encounter? How did you solve them?

The preceding discussion should make it clear how misleading it is to define the subject in terms of only a single role, such as "doer of an action." The exercise should give you an indication of how to adequately assign the roles in specific instances.

As we progress through the various sentence patterns, we will take the subject for granted, except for instances in which its form or semantic role helps us to understand the pattern.

AUXILIARY VERBS

Before we deal with the various basic clause patterns, we must discuss a characteristic that all patterns have in common—their capacity to include **auxiliary verbs** such as *be*, *have*, *do* and the modal verbs *can*, *could*, *may*, *might*, *shall*, *should*, *will*, *would*, *must*. As we noted in other chapters, these occur before the main verb of the clause:

(47) a. Bill may/must/might leave.
b. Bill is leaving.
c. Bill has left.
d.*Bill left has.

The modal verbs and *do* are followed by a verb in its infinitival form; the progressive *be* is followed by a verb ending in *-ing*; and the perfective *have* is

followed by a verb in its past participle form.

The passive *be* must be mentioned here, too. Unlike the progressive *be*, it is followed by a past participle:

(48) Bill was followed by the FBI.

A clause may contain several auxiliary verbs:

(49) Bill may have been being followed by the FBI.

But they will always occur in the order:

(50) (Modal) (Perfective *have*) (Progressive *be*) (Passive *be*)

Each auxiliary is enclosed in parentheses because each is optional. and each clause may contain from zero to four auxiliary verbs.

Although the order of auxiliary verbs is invariant, the position of the first auxiliary verb with respect to the subject of its clause depends upon the type of clause involved. In indicative clauses, it occurs between the subject and the verb phrase. In interrogatives, the first auxiliary is placed to the left of the subject. In negative clauses, the negator, *not*, is placed immediately after the first auxiliary verb. Compare the indicative (a), interrogative (b), and negative (c) clauses below:

(51) a. Bill must leave.
b. Must Bill leave?
c. Bill must not leave.

(52) a. Bill is leaving.
b. Is Bill leaving?
c. Bill is not leaving.

(53) a. Bill has left.
b. Has Bill left?
c. Bill has not left.

(54) a. The postcard was mailed yesterday.
b. Was the postcard mailed yesterday?
c. The postcard was not mailed yesterday.

(55) a. Bill should have been being followed by the FBI.
b. Should Bill have been being followed by the FBI?
c. Bill should not have been being followed by the FBI.

Because the placement of the first auxiliary verb is affected by whether its clause is interrogative or indicative, we place it in a special phrase, which we call **AUX**, for auxiliary. Because every clause may include auxiliary verbs, we include AUX in all the formal patterns that we present below. We will deal in more depth with the placement of multiple auxiliaries in our chapter on Modifications of Basic Clause Patterns.

TENSE AND ASPECT

What we are calling "basic clauses" here are sentences consisting of a single clause, which we referred to as "simple sentences" in our Skeleton of English Grammar chapter.

All English main clauses and many types of subordinate clause must be marked for tense and may be marked for aspect. We briefly introduce these two grammatical categories here and discuss tense more thoroughly in the Appendix to this chapter.

Tense

Both tense and aspect involve reference to time. Time is a continuum on which events succeed each other from the past through the present to the future. The past is prologue and the future is the yet-to-be-written postscript. English allows many ways to refer to time. In *John Kennedy was assassinated at 12:30 p.m. on November 22, 1963*, for example, the PPs, *at 12:30 p.m.* and *on November 22, 1963*, identify the time of day and the date of Kennedy's assassination. The time is given in terms of the two twelve hour periods into which we divide days; the date is given in terms of the day of the month and the year in the western calendar.

Tense is the set of grammatical categories that languages use to relate the time of the situation denoted by the clause to the time at which the clause is said or written. Grammatical categories, as we have seen, are represented by elements of the grammar of a language rather than by its words. English grammatically distinguishes three tenses: past, present, and future. The past and present tenses are indicated by inflectional morphemes: the regular past tense is indicated by {-ed}, though there are many irregular forms, such as *was/were*, *had*, *did*, *won*, *bought*. The regular present tense has no marking, unless the subject of its clause is third person singular, in which case the verb takes the {-s} inflection, though, again, there are a few exceptions, such as *is*, *has*. The future is typically indicated by a modal verb, especially by *will*. For example:

(56) a. She liked her linguistics classes. [Past tense]
b. She likes her linguistics classes. [Present tense]

c. She will like her linguistics classes. [Future tense]

If there is no auxiliary verb in a clause, the tense is marked on the main verb, as in (56a,b). If the clause does contain an auxiliary, the tense will be marked on the first auxiliary. *Will* in (56c) is in the present tense; its past tense is *would*. Compare the present and past tense forms of the auxiliaries in:

(57) a. Oscar **is/was** playing bridge.
b. Oscar **has/had** dealt the cards.

Exercise

To convince yourself that only the first auxiliary verb in a sequence may be marked for tense, observe what happens when you move the tense marking from the first to the other verbs in *The pie might have been eaten by the cat*, e.g., **The pie may had been eaten by the cat*. You should find that placing the tense marker on any verb other than the first one results in ungrammaticality.

Very simplistically, the past tense indicates that the situation represented by the clause occurred prior to the time at which the clause is uttered; the present tense indicates that the situation represented by the clause overlaps the time at which the clause is uttered; and the future tense indicates that the situation is spoken about prior to when it occurs (if it ever does). For instance, in (58), note the correlations between the time adverbs, *yesterday*, *today*, and *tomorrow*, and the verb forms in the clauses they belong to:

(58) **Yesterday**, Oscar **inherited** a million dollars; *today* he *owns* a Testarossa; tomorrow he will be broke again.

While these tense forms are quite simple, their actual uses are quite complex, and we deal with them more fully in the Appendix to this chapter.

Exercise

The following text is from Edith Wharton's *The House of Mirth* (1905/1989: 10-11). (a) Identify all the tense forms in the text. (b)

Discuss the systematic difference between the use of past and present tense forms in the passage. Why do you think the author used the two tenses in this way? What would happen to the text if you were to re-write it so that all the present tense forms were changed to past tense forms, and vice versa? Why would that be so?

> She began to saunter about the room, examining the bookshelves between puffs of her cigarette smoke. Some of the volumes had the ripe tints of good tooling and old morocco, and her eyes lingered on them caressingly, not with the appreciation of an expert, but with the pleasure in agreeable tones and textures that was one of her inmost susceptibilities. Suddenly her expression changed from desultory enjoyment to active conjecture, and she turned to Selden with a question.
>
> "You collect, don't you—you know about first editions and things?"
>
> "As much as a man may who has no money to spend. Now and then I pick up something in the rubbish heap; and I go and look at the big sales."
>
> She had again addressed herself to the shelves, but her eyes now swept them inattentively, and he saw that she was preoccupied with a new idea.
>
> "And Americana—do you collect Americana?"
>
> Selden stared and laughed.
>
> "No, that's rather out of my line. I'm not really a collector, you see; I simply like to have good editions of the books I am fond of."
>
> She made a slight grimace. "And Americana are horribly dull, I suppose?"

Aspect

Aspect is the set of grammatical devices that languages use to categorize situations according to such characteristics as occupying an expanse of time, taking only an instant of time, being repeated, and being complete. Although tense is probably much more familiar to you than aspect, aspect occurs more frequently than tense in the world's languages.

English uses the auxiliary verbs *be* and *have* and the idiom *used to* to create three grammatical forms that are regarded as aspects: the progressive, the perfect, and the habitual, respectively. We distinguish between the (a), (b),

and (c) forms in (59) and between (60a) and (60b):

(59) When we arrived,
  a. he made sandwiches.
  b. he **was** mak**ing** sandwiches.
  c. he **had made** sandwiches.

(60) a. He cycled to work.
  b. He **used to cycle** to work.

The clause in (59a) has a simple past tense form, but is not marked for aspect. The bolded elements in (59b) (a form of the verb *be* followed by a verb ending in {-ing}) mark the **progressive aspect**. Sentences like (59c) are said to be in the **perfect aspect**, characterized by a form of *have* followed by a past participle (Ven) (bolded). Sentence (60b) illustrates the **habitual aspect**, indicated by the expression *used to* followed by an uninflected verb (bolded). The auxiliaries *be* and *have* of the progressive and perfect aspects can be either past or present tense. These aspects can occur together in sentences:

(61) a. He has been making sandwiches for over an hour.
  b. He used to be writing a book.

Sentence (61a) combines perfect and progressive; (61b) combines habitual and progressive.

Tenses and modals can also combine with the progressive and perfect aspects. *Had* in (62) indicates both past tense and perfect aspect; *been making* indicates the progressive. (63) combines the present tense modal, *may*, with the perfect, *have*, and the progressive, *been making*.

(62) He had been making sandwiches for hours by the time we arrived.

(63) He may have been making bombs, for all we know.

While tense links the situation represented by a sentence to the time at which the sentence is uttered, aspect represents features of the temporal structure of the situation the sentence describes. The progressive aspect characterizes an event as (a) enduring for a period of time, (b) temporary, and (c) not necessarily complete.

The perfect indicates that a situation that obtained in the past is still relevant at some later time. If the sentence is a present perfect (e.g., *I have lived here for seven years*), the relevant later time is the time of utterance. If the sen-

tence is a past perfect (e.g., *I had met him several times by 2004*), the relevant later time is prior to the time of utterance and may be specified by an adverbial; *2004* has this function in the current example. If the sentence is a future perfect (e.g., *I will have lived here for 30 years by 2010*), the relevant time is later than the present and may be specified by an adverbial such as *by 2010*.

The habitual aspect indicates that a situation continued for such an extended period of time in the past that it can be taken as a characteristic of the entire period. We explore the complexities involved in interpreting these forms in more detail below.

Progressive aspect

We begin by illustrating three features of the interpretation of the progressive aspect. The form indicates that the event is viewed as involving a period, rather than merely a point of time:

(64) The jet changed direction.
(65) The jet is changing direction.

The first of these two sentences is neutral with respect to whether the change of direction is sudden or gradual. The second sentence characterizes the change of direction as taking time. How much time is not at issue.

The situation represented in the progressive aspect is viewed as temporary rather than permanent, as illustrated in (66) and (67).

(66) I live with my parents.
(67) I am living with my parents.

The progressive sentence is readily compatible with a continuation such as, *while my own house is being rebuilt*. The simple present is not quite so natural with that continuation.

The progressive suggests that the situation it represents is not necessarily complete, as (68) and (69) show.

(68) The man died.
(69) The man was dying.

The latter sentence is compatible with a continuation that indicates that the dying process was never completed: *but we managed to save his life*. The former is not.

The progressive frequently represents a situation during which another

situation occurs:

(70) The burglar was leaving by the rear window when/as the police arrived.

It is also interpreted as indicating repeated action when its main verb represents events as taking only a point of time. Compare the following:

(71) John is hitting his carpet.
(72) John is vacuuming his carpet.

Hit is understood as taking only a point of time; *vacuum* as requiring a period. So a natural interpretation of the first is that John repeatedly hits his carpet; the second most naturally represents continuous activity, not repeated vacuumings.

The final issue we raise in regard to the progressive has to do with the classes of verbs that can occur in this aspect. We noted in our chapter on Major Parts of Speech that all verbs except those that refer to states can appear as progressives. Thus verbs representing events, whether momentary (*hit*, *wink*), transitional (*arrive*, *leave*), action (*drink*, *type*), or process (*grow*, *widen*) occur with the progressive. State verbs, which include verbs of perception (*hear*, *see*), cognition (*know*, *understand*), or having and being (*be*, *contain*, *own*) are not compatible with the progressive.

There are however, certain state verbs that appear to be exceptions to this generalization. One can say, for example, *John is being silly*. When we view sentences such as this from the perspective we have developed we can see that it really is not particularly exceptional. Compare it to *John is silly*. The latter sentence suggests that silliness is a more or less permanent or typical characteristic of John, while the former suggests merely that while John is currently silly, he is not necessarily typically or permanently so. If we were to paraphrase the former sentence, we would probably use a verb such as *act*: *John is acting silly*. So it appears that *be* in this kind of sentence is interpreted as an activity rather than a state verb. We saw this kind of recategorization of words earlier in our discussion of mass and count nouns.

Exercise

1. For each of the following sentences, indicate the meaning of the progressive by selecting the appropriate choice in parentheses. (One of these sentences raises questions about the generalizations above. Can

you find it?)

a. The plane is taxiing. (The action does/does not take a period of time.)
b. I watch television. (Is/is not compatible with continuation "while my clothes are drying.")
c. I was watching television. (Is/is not compatible with continuation "while my clothes were drying.")
d. I am earning $4.75 an hour. (Suggests permanence/impermanence.)
e. (1) As the beast advanced, (2) the hikers were planning their escape route. (Event (1) occurred during event (2)/Event (1) did not occur during event (2).)
f. Sarah was jumping well at the meet. (Implies repeated jumping/continuous activity.)
g. Oscar is being a ninny. (Implies that Oscar is a temporary/permanent ninny)

2. Other verbs besides *be* may be followed by Ving forms, e.g., *The Energizer Bunny **keeps on** going, and going, and going. The rescuers **continued** working through the night*. (a) What other verbs can you think of that take the progressive Ving form? (b) What meaning do these verbs have in common?

3. The following text is adapted from "A New List for a New Year," an article by David Noonan, *Newsweek* (January 21, 2008 p. 18). The article is about making a list of illnesses besetting oneself and one's friends. (a) Identify all the instances of the progressive in the text, making sure not to be misled by non-progressive Ving forms and progressives with an omitted but understood wh-word and form of *be*. (b) Identify the tense of each of the progressives you listed. (c) List the different forms of the progressives you identified. (d) Discuss the reasons why the author might have chosen the progressives in this text. Are they consistent with the discussion of the progressive just above?

> I got the idea for my list a couple of days after Christmas, during a memorial service for an old friend who died of Huntington's disease. . . . As I sat listening to stories about my friend, I thought about my brother, John, who was diagnosed with oral cancer in 2005 and who is now doing fine. I also thought about my father, who beat colon cancer 22 years ago; a younger member of my extended family

who is living with bipolar disorder, and a friend facing the daily challenge of hepatitis C. You see where this is going. . . .

With my list in hand, I'm working toward a new way of thinking about health and disease. Illness is the rule, not the exception. That may sound depressing, but if I accept the idea—and how can I not when I read all those names?—then I have to do more than wait around for the next dreaded phone call. . . .

Another thing I can do is be more useful to the people on my list. Like most folks, I usually make it a point not to think about a friend's or relative's health problems when I'm hanging out with him. But talking can be a good thing. It may not be easy—for either party—but there's no doubt that sharing the burden of an illness can be beneficial.

Perfect aspect

The perfect aspect represents an earlier situation as being relevant in some way at a later time, so it must be distinguished from the simple past tense. Situations that continue right up to the time of reference can be viewed in this way, as can very recent situations:

(73) I have been a taxpayer since 1980.
(74) By 2005, I had been a taxpayer for 23 long years.

In (73) the time of reference is the time at which the sentence is uttered, so the present perfect is used; in (74) the time of reference is 2005, which is before "now," so the past perfect is used. Both sentences imply that the condition of being a taxpayer continued up to the reference time.

The situation need not be a state or condition. When the verb represents an event, the sentence may represent repetition of that event. This usually requires an appropriate adverbial phrase:

(75) We have visited Norway every July for 15 years.

The relevance of the situation represented by the sentence need not be as clear as the continuation of the situation itself. *We have visited Norway* suggests that we made at least one visit during the period leading up to the time of utterance. The situation may also be interpreted as an event that resulted in a state that continued to the time of reference. *The bus has stopped* implies that the bus is now stopped, just as *Mother has arrived* implies that Mother is now here.

The relevant time span can also be interpreted as shortly before the reference time, or recently:

(76) I had (just) finished another paper by then.
(77) Have you seen my spectacles (recently)?

Exercise

1. Using the discussion just above, identify what is implied by the use of the perfect in each of the following sentences.
   a. Mary has played tennis for seventeen years.
   b. Mary has played tennis.
   c. Mary has just played tennis.
   d. Martin has given a Groundhog Day party for 17 years.

2. Why is the following interchange odd?
   Zeke: Have you cooked dinner?
   Clem: Yes, about ten years ago.
(What happens if you add *ever* or *yet* to Zeke's question?)

3. The following is an extract from a *Scientific American* article by Rob Dunn, (December 2007: 46) on the surprising speed at which evolution can occur. (a) Identify all the instances of the perfect aspect in the passage. You should find that almost all the sentences in the passage are in the perfect. (b) What is the tense of each perfect clause? (c) Why do you think the author chose the perfect aspect as basic for this piece? To help with this last question you might try re-writing the passage without using the perfect, for example, in the simple past tense, and comparing the two versions.

> We see rapid evolution most often where some force (often us) has given it a jump start by suddenly and dramatically altering an organism's environment. Rats have developed smaller bodies when introduced to islands. Trophy fish have also adopted smaller body sizes in response to fishers' preference for big fish (which, if killed, do not breed). Mayflies in streams where trout were released now forage at night to avoid the fast-swimming predators. Many hundreds of herbivorous species have switched to novel, sometimes toxic, food sources introduced by humans and have come to specialize in consuming those new resources. Various native species have evolved in

response to newly arrived competitors. Cedar trees have begun making toxins to protect themselves from being eaten by deer now roaming in their formerly benign habitats. Mussels in New England have evolved the ability to detect invasive green crabs and produce thicker shells where the crabs are present.

Habitual aspect

The habitual aspect represents states or habits that are characteristic of an entire period. The English habitual marker *used to* is generally understood to indicate a situation that obtained in the past: *We used to have five cats*; *We used to drive to work every morning*. However, these sentences do not strictly entail that these situations no longer hold. We could add to either of these sentences the continuation . . . *and in fact we still do*.

Note the spelling: it is *use**d** to* not *use to*. *Used* is in its past tense form, as you would expect for a verb referring to events in the past.

Exercise

Why do we have the tendency to spell *used to* as *use to?*

BASIC CLAUSE PATTERNS

The basic clause patterns differ from each other by the type of main verb in their verb phrases, that is, their predicates. The verb types are differentiated from each other by the functions and phrases they require to be present or to be absent in the VP. We resume our use of formal tree diagrams and the Reed/Kellogg system of functional diagramming.

Basic clause pattern 1: intransitive

The simplest clause pattern corresponds to the functional formula in (78a) and exemplified in (78b):

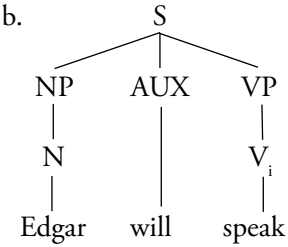
(78) a. Basic clause pattern 1
Subject Verb Head

(78) b. Edgar | will speak

Formally, this pattern contains an NP with a VP whose head verb is intransitive. (We abbreviate this verb as V_i.) The clause can contain no objects or complements. The formal pattern is (79a), whose corresponding tree diagram is (79b):

(79) a. NP AUX [$_{VP}$V$_i$]

(79) b.



Examples of this pattern are:

(80) a. Edgar spoke.
b. Edgar spoke eloquently.
c. Edgar spoke to the crowd.
d. Edgar spoke eloquently to the crowd.
e. Edgar will speak to the crowd this evening.
f. Edgar spoke eloquently to the crowd after the protest march.
g. Edgar spoke eloquently to the crowd after the protest march had concluded.
h. Edgar will have been speaking for an hour in just a few moments.

Exercise

Identify the whole subject, any auxiliaries, and the whole VP in each of the sentences in (80).

The greater length and complexity of some of these sentences arise not from changes in the basic clause pattern of the simpler examples, but because of choices in auxiliaries and modifiers. Modifiers in the VP and auxiliaries have no effect on the basic pattern. This fact holds true even when, as in (80g), a modifier is a clause: the modifying clause naturally has its own pattern (here also pattern 1), but as a modifier, it is irrelevant to the pattern of the clause that contains it.

Basic clause pattern 2: simple transitive

If clauses represent propositions, and propositions represent situations, then many situations involve more than a single essential participant. Some require two, others three, and a few four. The next five clause patterns consist of ways to add participants represented by various types of objects and/or complements. Note that all of the clause patterns require a subject, either

overt or "understood."

Pattern 2 has the functional structure (81a), exemplified by (81b):

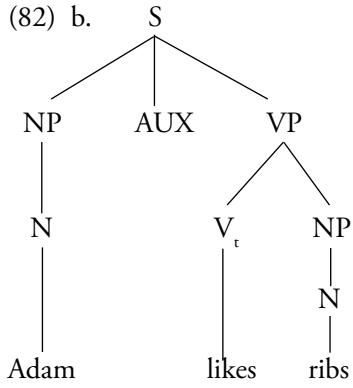
(81) a. Basic clause pattern 2
Subject Verb Head Direct Object

(81) b. Adam | likes | ribs

The formal pattern, (82a), contains a VP consisting of a transitive verb, (Vt), and an NP. Its corresponding tree diagram is (82b):

(82) a. NP AUX [$_{VP}$V$_{t}$ NP]

(82) b.



By definition any verb that takes an object is transitive. The objects are italicized in the following examples of pattern 2:

(83) a. Adam likes *ribs*.
b. Eve enjoys *apples*.
c. The snake held *a particularly luscious Granny Smith.*
d. Occasionally, Adam would accept *small appealing gifts* from Eve.
e. Adam likes *those who offer something for nothing*.

Regardless of the complexity of the direct object NPs in (83), these sentences still represent pattern 2.

A convenient test for this pattern is to replace the NPs with appropriate pronouns. The result will be of the following pattern:

(84) He/she/it/they - Verb - him/her/it/them
Nominative Accusative

The nominative pronouns replace the subject NP; the accusative pronouns replace the object. By this test, sentences (83a) and (83e) both reduce to *He*

likes them. As in the case of the intransitive pattern, modifiers and auxiliaries do not affect the basic pattern.

Another test of objecthood is based on the fact that many clauses of pattern 2 may be passivized. Generally, direct objects may be passivized; modifiers can never be. The (a) clauses below are the active counterparts of the passive (b) clauses.

(85) a. The entire family can enjoy nature movies.
b. Nature movies can be enjoyed by the entire family.
(86) a. Multinational corporations exploit poor countries.
b. Poor countries are exploited by multinational corporations.

The object of the active clause corresponds to the subject of the passive. You should convince yourself that *nature movies* and *poor countries* really are the subjects of (85b) and (86b), respectively, by applying the tests for subjecthood we developed earlier.

As a final remark on objects, note that most of the semantic roles available to subjects are available also to objects, so objects may be interpreted in a wider range of ways than just the traditional "entity affected by the action of the verb."

Exercise

(a) Identify the (whole) object in each of the following clauses, then (b) identify the object's semantic role:

a. Bill moved the table.
b. Bill made the table.
c. The divorce upset him.
d. The doctor stitched the wound.
e. We use a word processor for our work.
f. The fund drive benefited the local radio station.
g. We left the room.
h. We approached the border.
i. We skied the mountain trails.
j. We would appreciate it greatly if you would leave.

What problems did you encounter? How did you solve them?

Basic clause pattern 3: subject complement

The subject complement construction resembles the direct object pattern in

having three basic elements. The main difference between the two lies in the nature of the head verb and the semantic relations it creates. The functional formula is (87a), exemplified by (87b):

(87) a. Basic clause pattern 3
Subject Verb Head Subject Complement

(87) b. Mary | became famous

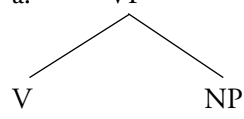
The pattern is slightly complicated by the fact that two different forms can act as subject complement: a noun phrase or an adjective phrase. The italicized phrases in (88) and (89) illustrate NP and AP complements, respectively.

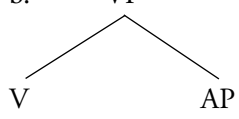
(88) a. Mary became *a doctor*.
b. You are *a nuisance who ought to be barred from the pool*.
c. He proved *a success at ice-carving*.
(89) a. Mary became *famous*.
b. I am *quite aware of her foibles*.
c. He proved *unwilling to cooperate with my attorney*.

The formal formula for pattern 3 is NP AUX [$_{VP}$V {NP/AP}], which combines the two formulae, (90a, b):

(90)a. NP AUX [$_{VP}$V NP] (90)b. NP AUX [$_{VP}$V AP]

We represent the VP portions of these formulae as (91a, b):

(91) a.


(91) b.


NP complements are sometimes called **predicate nominals** or **predicative nominatives**. AP complements are sometimes referred to as **predicate adjectives**.

A pattern that is helpful in distinguishing subject complements from objects and modifiers is number agreement with the subject NP. If we make the subject NP plural, we must also make a subject complement NP plural. Compare (88a) with:

(92) a. Mary and Terry became doctors.
b.*Mary and Terry became a doctor.
c.*Mary became doctors.

Because English APs are not marked for number, this test does not work for AP subject complements.

Meaning can also help identify a subject complement. First, the subject and the subject complement must denote the same entity. This may be indicated by assigning the subject and the complement the same subscript:

(93) Mary_i is a doctor_i.

Thus *Mary* and *a doctor* apply to the same individual. As we noted above, the semantic role of the complement is Attribute. The subject complement denotes either a permanent or a temporary status, characteristic, or property of the subject. Understanding the function in this way will allow you to distinguish pattern 3 from pattern 2, where the NP following the verb group does not ascribe a characteristic to the subject:

(94) Mary visited a doctor.

Of course, the entire VP assigns a characteristic (of visiting a doctor) to Mary, but our test applies only to the structure after the verb. In (94) we are referring to two distinct individuals; in (93) we refer only to one.

Semantics also enters into the identification of subject complements because of the nature of the head verb. We can describe the basic meaning of the verb in subject complement clauses as BE/BECOME. These are the primitive notions of state and change of state. (Do not confuse this difference with stative and activity meanings of verbs.) These are the **linking verbs** we met in our chapter on Minor Parts of Speech. We list some of them in Table 1.

be (am, is, are, was, were, be, being, been)			
appear	become	feel	get
go	grow	look	make
prove	seem	smell	sound
taste	turn		

TABLE 1. SOME LINKING VERBS

However, nearly all of these verbs may have meanings other than BE or BECOME. When they have those other meanings, they may not take a subject complement. In the following examples, the (a) clauses contain subject complements, and the (b) clauses represent some other pattern.

(95) a. Hoolihan appeared weak.
b. Hoolihan appeared. (Pattern 1)
(96) a. Boris felt sorry.
b. Boris felt pain. (Pattern 2)
(97) a. Newton proved unreliable.
b. Newton proved the theorem. (Pattern 2)
(98) a. The milk turned sour.
b. Osgood turned away. (Pattern 1)

We can use passivization to distinguish between VPs containing subject complements and those containing direct objects. We can often passivize a direct object (99) but never a subject complement (100).

(99) a. Einstein proved the theory.
b. The theory was proved by Einstein.
(100) a. Einstein proved the better physicist.
b. *The better physicist was proved by Einstein.

Exercise

(a) Identify the (whole) subject complement in each of the following clauses. (b) Using one appropriate criterion, prove that the phrase you identified as the subject complement really is the subject complement. (c) Draw both Reed/Kellogg and structural diagrams for each clause.

a. Elena grew tired.
b. The onions smelled sulphurous.
c. The anchovies tasted fishy and salty.
d. The sax sounded off-key.

Clause pattern 4: object complement

The object complement pattern may be viewed as a combination of pattern 2, the basic transitive pattern, and pattern 3, the subject complement pattern. Just as pattern 3 includes a subject complement, pattern 4 adds a complement to its direct object. The functional formula for pattern 4 is

(101a), exemplified by (101b):

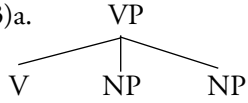
(101)a. Basic clause pattern 4
Subject Verb Head Direct Object Object Complement

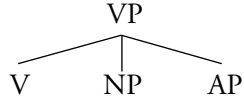
(101)b. I | consider | Elvira \ weird

The two formal patterns corresponding to (101a) are (102a,b) which we can abbreviate as (102c):

(102)a. NP AUX [$_{VP}$V NP NP]
b. NP AUX [$_{VP}$V NP AP]
c. NP AUX [$_{VP}$V NP {NP/AP}]

The trees corresponding to the two VPs involved are:

(103)a.


(103)b.


Object complements are similar to subject complements in four respects. First, an object complement may be formally expressed as either an NP or as an AP, italicized in:

(104)a. I consider Elvira *a weirdo*.
b. We proclaimed her *our champion*.
c. She painted the room *a ghastly color*.
(105)a. I consider Elvira *weird*.
b. We found her *guilty*.
c. She painted the room *mauve*.

The second feature common to subject and object complements is that in both, an NP complement must agree with its antecedent (the subject or the object):

(106) I consider Elvira and Elvis weirdos/*a weirdo.

Here again, because English APs cannot be marked for plural, there can be no agreement between an AP object complement and the direct object of its clause.

To see the third parallel with subject complements, we must observe the semantic relation between the direct object and its complement. If you consider carefully the sentences in (104) and (105), you will notice that the semantic relations between the object and its complement are BE and BECOME. For instance, in (104c) the room becomes a ghastly color. Here again the semantic role associated with the complement is Attribute.

The final similarity between subject and object complements is that the complement phrase and the subject or object to which it is semantically linked refer to the same entity or entities. We indicate this by identically subscripting the object and the complement:

(107)a. NP AUX $[_{VP}$V NP_i $NP_i]$
b. NP AUX $[_{VP}$V NP_i $AP_i]$

Object complements have one further defining trait, the meaning of the head verb. Examine Table 2 to see if you can identify any semantic common denominators.

appoint	call	choose	consider	
declare	designate	elect	find	
imagine	make	name	paint	prove

TABLE 2. TYPICAL OBJECT COMPLEMENT VERBS

The two semantic classes that unite most of these words are CONSIDER TO BE (*consider*, *imagine*, *think*) and CAUSE TO BECOME (most of the others), illustrated by the examples in (108) and (109), respectively.

(108)a. We find his conclusion ridiculous.
b. They called each other liars.
(109)a. The president named him Secretary of the Bubblegum Department.
b. The children painted all the walls kelly green.

Object complement verbs, just like subject complement verbs, have a variety of meanings, not all of them compatible with object complements. The (a) version of each clause below contains an object complement; the (b) versions contain the same verb in a different pattern.

(110)a. We declared Woople the winner.
b. We declared a holiday. (Pattern 2)
(111)a. Scott and Zelda painted the town red.

b. Scott and Zelda painted the door. (Pattern 2)

(112)a. Weskin's false predictions proved him a hoax.

b. Weskin's false predictions proved his undoing. (Pattern 3)

There are many idiomatic constructions that involve an AP object complement. Some of these appear in Table 3, where X denotes a variable direct object. (This should be familiar to you from our discussion of object complements as VP in our chapter on Phrases.) As will be clear, nearly all these expressions indicate the notion of CAUSE TO BECOME.

cut the story short	cut X short
drain X dry	make X plain
leave X clean	make X clear
make X possible	pack X tight
push X open	put X straight
shake X free	slam X shut

TABLE 3. SOME IDIOMATIC OBJECT COMPLEMENT EXPRESSIONS

Exercise

(a) Identify the (whole) object and object complement phrases in each of the following clauses. (b) Using one appropriate criterion, prove that the phrase you identified as the object complement really is an object complement. (c) Draw both Reed/Kellogg and structural diagrams for each clause.

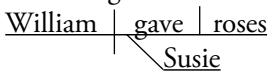
a. Oscar slammed the door shut.
b. The president appointed Wilson Secretary of the Navy.
c. Sharon painted her room lime green.
d. The preacher declared them husband and wife.

Basic clause pattern 5: double object (indirect object and direct object)

This basic clause pattern again involves a head verb followed by two functions, as in:

(113)a. Subject Verb Head Indirect Object Direct Object

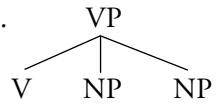
b. William gave Susie roses

c. 

As the formula indicates, the last two functions occur in this order: indirect object (IO)—direct object (DO). (Recall that in pattern 4 the DO appeared *immediately after* the verb head.) Formally, both objects are typically NPs. The formal version of pattern 5 is:

(114)a. NP AUX [$_{VP}$V NP NP]

(114)b.



In each of the following examples the IO is italicized:

(115)a. Willard gave *Susie* roses.
b. The eighteenth century brought *England* great prosperity.
c. She paid *her creditors* a part of the debt.
d. Oscar made *his friend* a beautiful desk.

In patterns 4 and 5, a verb may be followed by two NPs. These two structures can be readily distinguished. In pattern 4, the two NPs refer to a single entity; in pattern 5, each NP refers to a separate entity.

As usual, semantics plays a role in the pattern, both in the nature of the verb and in the semantic role of the indirect object. The verb has the prototypical meaning of GIVING or of BENEFITING. In (115a,b,c), the notion of giving is clear; (115d) illustrates the meaning of benefiting.

On these semantic grounds, we can identify certain verbs that take indirect objects. We list a typical sample in Table 4.

allow	ask	assign	bequeath	bring
buy	deny	forbid	forgive	grant
hand	leave	lend	make	owe
pardon	pay	refund	refuse	remit
sell	send	show	sing	spare
teach	tell	throw	write	

TABLE 4. SOME DOUBLE OBJECT VERBS

The list in Table 4 hides some complexities. First, most of the verbs commonly occur in patterns that do not have explicit indirect objects:

(116)a. Allison asked a profound question. (Pattern 2)
b. Walpole refused. (Pattern 1)

c. Finkle made a successful legislator. (Pattern 3)
d. We made Portnoy our representative. (Pattern 4)

Second, many verbs not on the list can be understood as having a Beneficiary, especially if they refer to some type of production:

(117) Wanda baked Phyllis a birthday cake.

Third, the action denoted by the verb may involve something that is not literally "transferred" to a recipient, nor is it always "beneficial":

(118) Roscoe gave Morgentherp a sound thrashing.

Since the meaning of verbs is so flexible, it is more illuminating to consider the semantic roles assigned to the noun phrases in this pattern. The subject is likely to be a causer such as an Agent or Stimulus:

(119)a. Anderson bought us souvenirs. (Agent)
b. The accident taught us a bitter lesson. (Stimulus)

Indirect objects tend to be Recipients or Benefactives; direct objects tend to be Themes. But this is just a tendency, not an absolute restriction. In (120), for example, the subject is an Agent, the direct object a Factitive, and the indirect object is a Source.

(120) They asked me an unanswerable question.

There is a relatively reliable test for distinguishing pattern 4 from pattern 5 constructions. We will call this the Dative Test. (Dative is the Latinate term for the case of indirect objects.) Pattern 5 clauses can generally (though not always) be paraphrased by a clause pattern in which the order of the two object NPs is reversed, and a preposition is inserted before the second (corresponding to the IO). *To* usually indicates Recipient; *for* usually indicates Beneficiary. The sentences in (121) paraphrase a selection of those above:

(121)a. Willard gave roses to Susie.
b. The eighteenth century brought great prosperity to England.
c. She paid a part of her debt to her creditors.
d. Warthog built some kitchen shelves for his aunt.
e. Wanda baked a birthday cake for Phyllis.

f. Anderson bought souvenirs for us.

One drawback of the Dative Test is that it does not distinguish between the Recipient and Goal meanings of the preposition *to*. Only the former is relevant in this context, so (122a) reflects pattern 2 with a verb modifier, not pattern 5:

(122)a. Anderson sent the children to the lake.
b.*Anderson sent the lake the children.

Also, the test will not work with certain fixed indirect object constructions:

(123)a. It cost me a fortune.
b.*It cost a fortune to/for me.
c. He gave me a ring. (ambiguous)
d. He gave a ring to me. (unambiguous)

The object complement construction has no such paraphrase:

(124) *We elected president to/for him.

Moreover, we can apply passive to the IO in pattern 5 clauses, just as we can to the DO in pattern 4:

(125) I was given the roses by Warthog.

Some varieties of English even allow the direct object of pattern 5 clauses to be passivized:

(126) The roses were given Susie by Warthog.

The object complement NP in the VP of pattern 4 clauses cannot be passivized:

(127) *President was elected him by the voters.

A final restriction on this pattern is that the direct object NP cannot be a pronoun:

(128)a. Wanda baked Phyllis the cake.
b.*Wanda baked Phyllis it.

Exercise

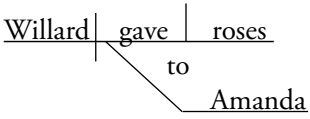
(a) Identify the (whole) direct and indirect object phrases in each of the following clauses. (b) Using the most appropriate criterion, prove that the phrase you identified as the indirect object really is the indirect object. (c) Draw both Reed/Kellogg and structural diagrams for each clause.

a. She gave the dog a bone.
b. We made each of the children a balloon animal.
c. Oscar refused his uncle entry.
d. Wanda sang the babies a lullaby.

Basic clause pattern 6: Recipient/Benefactive

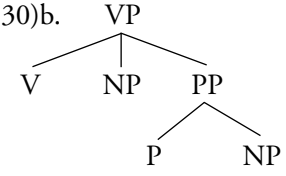
Like patterns 3, 4, and 5, this basic clause pattern includes a head verb followed by two functions:

(129)a. Subject Verb Head Direct Object Recipient/Benefactive

b. 

The formal version of pattern 6 is:

(130)a. NP AUX [$_{VP}$V NP PP]

(130)b. 

Examples of this pattern include:

(131)a. Willard gave roses to Amanda.
b. The eighteenth century brought great prosperity to England.
c. Oscar baked a birthday cake for Amanda.
d. Oscar pulled the weeds for his friends.

While the meanings and semantic roles represented by this pattern are not identical to those represented by pattern 5, they are similar enough so that many traditional and school grammars refer to the NP expressing the Recipient or Benefactive roles as an indirect object. From a formal point of view, this NP is the object of the preposition that governs it, so in keeping with our formalist preferences, we will restrict the term *indirect object* to the NP that occurs directly after the verb and before the direct object in sentences of pattern 5.

As we noted in our discussion of pattern 5, the two patterns cannot be viewed simply as variants of each other. That is, we cannot always rephrase a sentence in one pattern as a sentence in the other pattern. Such substitutions may either change the meaning or result in ungrammaticality. In particular, if the direct object of a pattern 6 sentence is a pronoun, as in (132a), then rephrasing the sentence as a pattern 5 sentence results in an ungrammatical sentence like (132b):

(132)a. We made it for Oscar.
b.*We made Oscar it.

Sentences such as (133a) are ambiguous. They can describe a telephone call or a gift of a ring. However, their pattern 6 counterparts, (133b), can only describe a gift-giving:

(133)a. Oscar gave Amanda a ring.
b. Oscar gave a ring to Amanda.

Exercise

(a) Identify the (whole) Recipient/Benefactive phrase in each of the following clauses. (b) Using one appropriate criterion, prove that the phrase you identified as a Recipient/Benefactive phrase really is a Recipient/Benefactive phrase. (c) Draw both Reed/Kellogg and structural diagrams for each clause.

a. She gave a bone to the dog.
b. We made balloon animals for the children.
c. Oscar wrote the plays for his adoring public.
d. Wanda sang a lullaby for the babies.

Basic clause pattern 7: intransitive Location and Goal clauses

Sentences like (134a and b) respectively represent an entity as being in a Location and an entity moving to a Goal (which, of course, is a Location to or toward which something moves or is moved):

(134)a. The king was in his counting house.
b. The king went to the council chamber.

We can represent these functionally as:

(135) Subject Verb Head Location/Goal

The Location and Goal roles can be represented either as a PP (as in (134a,b) or as an AdvP, as in:

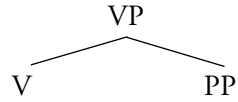
(136)a. The King is away (on business).
b. The King has gone away.

So they can be represented formally as:

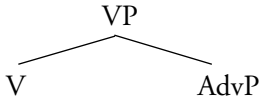
(137)a. NP AUX [$_{VP}$V {PP/AdvP}]

We can represent these VPs by the trees:

(137)b.



(137)c.



Basic clause pattern 8: transitive Location and Goal clauses

Sentences like (138) represent someone or something moving an entity to or toward a Goal (italicized):

(138) Oscar put his bicycle *in the laundry room/away*.

We can represent these functionally as:

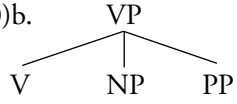
(139) Subject Verb Head Direct Object Location/Goal

And formally as:

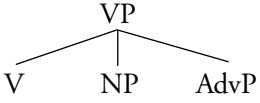
(140)a. NP AUX [$_{VP}$V NP {PP/AdvP}]

We can represent these VPs by the trees:

(140)b.



(140)c.



You probably noticed the parallel between patterns 3/4 and patterns 7/8. Patterns 3 and 7 are the intransitive version of patterns 4 and 8. Patterns 3 and 7 represent, respectively, an attribute and a Location/Goal of the subject, while 4 and 8 represent, respectively, an attribute and a Location/Goal of the direct object.

Note that pattern 8 clauses cannot be rephrased as pattern 5 clauses:

(141) *Oscar put the laundry room his bicycle.

Before we leave these clause patterns, we should briefly discuss just why we regard them as basic. First, they are all simple sentences; that is, none of them includes another clause within it. Second, they can all be elaborated by the addition of various types of optional modifiers, such as adverbial phrases. Third, and most important, is the fact that each pattern is a direct reflection of the class of verb that heads the verb phrase. In particular, each pattern is a reflection of the semantic roles assigned by the verb to the phrases (if any) in the predicate. Each pattern is also a reflection of the formal requirements imposed by its head verb. Some verbs require two NPs, some an NP and a PP, and some nothing at all. Thus verbs impose both semantic and formal requirements on the clauses they head.

Exercise

(a) Identify the (whole) Location or Goal phrase in each of the following clauses. (b) Using one appropriate criterion, prove that the phrase you identified as a Location/Goal phrase really is a Location/Goal phrase. (c) Draw both Reed/Kellogg and structural diagrams for each clause.

a. The king is in his counting-house.
b. Eleanor put the eggs in the refrigerator.
c. I left my laptop on the bus.
d. My son eventually put his clothes away.

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GLOSSARY

AGENT: the semantic role that denotes the animate instigator of an action.

AGREE: a grammatical relationship in which the form of one element (e.g., a subject) varies with the form of another element (e.g., a verb).

ATTRIBUTE: the semantic role that indicates the status, property, or characteristic ascribed to some entity.

BENEFACTIVE: the semantic role that indicates an animate being who benefits (positively or negatively) from an event.

COMMENT: the part of the sentence that says something about the topic. See

TOPIC.

EFFECTED (also called **FACTITIVE**): the semantic role that indicates the entity that comes into existence by virtue of an event.

EMPTY/EXPLETIVE: the semantic role assigned to a phrase that neither refers to an entity nor denotes an attribute.

EXPERIENCER: the semantic role that indicates the animate entity inwardly or psychologically affected by an event or state.

FACTITIVE: See **EFFECTED**.

FORCE: the semantic role that indicates the inanimate cause of an event. Has its own potency.

GOAL: the semantic role that indicates the place or state to which something moves.

INSTRUMENT: the semantic role that indicates the object (usually inanimate) with which an act is accomplished. Lacks power of its own.

LINKING VERB: a verb, such as *be* or *become*, that serves as the main verb in basic clause pattern 3; grammatically links subject and subject complement.

LOCATION: the semantic role that indicates the place or state at or in which something is at a particular time.

PATIENT: the semantic role that indicates the animate entity physically affected by the state or event.

PREDICATE ADJECTIVE: the syntactic function of an adjective phrase that follows a linking verb.

PREDICATE NOMINAL (also called **PREDICATE NOMINATIVE**): the syntactic function of a noun phrase that follows a linking verb.

RECIPIENT: the semantic role that indicates the animate being who is the (intended) receiver of the Theme.

SEMANTIC ROLE: a semantic relation between a noun phrase and a verb or other role assignor in a clause.

SOURCE: the semantic role that indicates the location from which something moves.

STIMULUS: the semantic role that indicates the trigger of an experiencer's psychological state.

THEME: the semantic role that indicates the entity whose movement, existence, location, or state is predicated by a verb.

TIME: the semantic role that denotes the time at which an event occurred.

TOPIC: the part of a sentence about which the remainder of the sentence says something. See **COMMENT**.

APPENDIX: TIME AND TENSE

We briefly discussed tense and aspect earlier in this chapter. Here we elabo-

rate on our discussion of English tenses. While we believe that every (English) teacher should have a good understanding of the tense system, we feel that a more detailed knowledge is most essential for teachers responsible for the education of students for whom English is a second (or later) language. However, as we ground our discussion of English tenses in their characteristic uses in texts, we believe that all teachers will find information of value in this appendix.

As we noted, every main clause and many types of subordinate clause in English are marked for tense. **Tense** is one way of indicating when the situation represented by the clause occurs. In order to sensibly talk about tense, we must first talk a little about time and some other ways in which time is indicated in English.

We conceptualize time as a line stretching indefinitely far into the past and indefinitely far into the future. The past is behind us and the future before us. (Note the spatial metaphor here.) The past is time already gone; the future is time yet to come. However, times are past, present, or future in relation to some chosen point of time. That point can be either fixed or variable. The fixed time may be the time of an important cultural event, for example, the birth of Christ in the western tradition or the birth of Mohammed in the Muslim tradition. The variable time is typically when an utterance is spoken, the **time of utterance**, "now." However, in narratives and other text types, "now" is determined within the text.

Identifying the time at which situations occur relative to the fixed point of time depends on systems for measuring time. We use cyclic occurrences such as days, months, and years for measurement from the fixed time point. So, as we write this, the year is the 2008th year following the birth of Christ. The choice of the beginning year is relatively arbitrary, but some selection must be made and going back to the Big Bang is a bit inconvenient.

Exercise

1. Do all languages/cultures have seven day weeks? Two day weekends? Four season years? Twelve month years? Solar years?

2. Do other languages/cultures divide their days into segments similar to ours?

3. English has a number of ways of expressing dates, some used primarily in the written language and some more likely to occur in the spoken language. For example, 8/22/07 is a written form. (a) Create

at least three more dates in this pattern and then fully and accurately describe the pattern. (b) Create at least three date expressions based on one other pattern that we use, then fully and accurately describe that pattern as well. (c) Is this second pattern more likely to occur in written English than in spoken, or vice versa? Imagining that you are teaching these patterns to someone who has never encountered them might help you to articulate them precisely.

4. English has several ways of expressing time, some used primarily in written language and some more likely to occur in the spoken language. For example, as this is being written it is 1:20 p.m. (a) Create at least three more time expressions of this sort, then fully and accurately describe this pattern. (b) Create at least three time expressions based on one other pattern that we use, then fully and accurately describe that pattern as well. (c) Is this second pattern more likely to occur in written English than in spoken, or vice versa? Again, imagining that you are teaching these patterns to someone who has never encountered them might help you to articulate them precisely.

We shift our focus now to a discussion of a system of time reference that employs an implicit and constantly moving reference point. Imagine that you call the garage where you left your car for repairs to ask if the car is ready. The receptionist who answers the phone says, *The mechanic is working on it right now.* When does *now* refer to? We can paraphrase the receptionist's answer as *The mechanic is working on it as I speak.* So *now* refers to the time at which the utterance it occurs in is said.

Exercise

How about *then?* Does *then* simply refer to times other than those we would refer to as *now,* or is it somewhat more complicated? Make up some sentences with *then* and work out the rules for using it.

Many expressions besides *now* and *then* depend for their full interpretation on identifying the time at which they are said. They include *today*, *yesterday*, and *tomorrow*. *Today* refers to the 24 hour period beginning at midnight and extending to the next midnight, within which the expression is said. So if on 6/25/2008 I say *I'll do it today* then I am saying that I will

do it sometime during 6/25/2008. *Yesterday* refers to the day before the day in which the expression is said, and *tomorrow* refers to the day following the day during which the expression is said. Expressions that depend for their full interpretation in this way on when (where, and by whom) an expression is uttered are called **deictic expressions** and the time (place, and speaker) are called the **deictic centers**.

Tenses

It is important to distinguish time from tense. Time is a non-linguistic phenomenon experienced by human beings; tense is a grammatical category, one of several ways that languages may use to refer to time. English and many (though by no means all) other languages have **grammaticized** ways of indicating temporal characteristics of states of affairs, that is, ways that have become part of the grammar (rather than the vocabulary) of the language.

A **tense** is a grammaticized way to indicate when a state of affairs occurs relative to the **time of utterance**, that is, the time at which that situation is spoken about. Generally, past tense refers to a time earlier than the time of utterance; future tense refers to a time later then the time of utterance; and present tense refers to a time that is identical to, or more typically, overlaps the time of utterance.

Past tense

We begin with the English past tense because we think that its regular forms and meanings are simpler than those associated with the other tenses.

Past tense forms

The regular past tense is formed by adding the suffix {-ed} to the word stem, for example: *delay*, *delay**ed***; *print*, *print**ed***. This suffix has three main allomorphs: [t], [d], and [ɪd] or [əd]. {-ed} is pronounced [ɪ/əd] when the word it is attached to ends in a [t] or [d], e.g., *lifted*; [t] when it is attached to a word that ends in a voiceless sound other than [t], e.g. *kissed*; and [d] otherwise, e.g., *rowed*.

The past tense marker {-ed} is spelled in various way. If the word ends in <e> then only <d> is added, *locat**e**: locat**ed***; if the word ends in a consonant followed immediately by <y>, change the <y> to <i> and then add <ed>: *empt**y***, *empt**ied***; if the word ends in a double consonant then add <ed>: *dress*, *dress**ed***; but if the word ends in a stressed syllable with a single vowel followed by a single consonant, then double that consonant and add <ed>: *dro**p***, *dro**pp**ed*; *prefe**r***, *prefe**rr**ed*.

Past tense meanings

The basic meaning of the past tense is very simple. It indicates only that something was the case in the past, that is, before "now." If I say *John was in his room*, then I am claiming that the description *John is in his room* held in the past. It says nothing about whether John is still in his room; he may or may not be, as can be seen from the fact that the sentence above can be followed by either *and he's still there* or *but he's not there now*.

The situation represented as occurring in the past may involve a single point of time (1a), repetition of events (1b, c), a period of time (1d), or a state (1e), respectively:

(1) a. The clock struck one.
b. The clock chimed twelve times.
c. We visited each other every weekend.
d. The noise droned on and on.
e. For many years Chris owned a Ferrari.

The past tense is compatible with completed situations and, indeed, many past tense sentences do denote situations that ended in the past. The suggestion that the situation was completed in the past is due to a number of factors, but not to the past tense form itself. For example, if the event was instantaneous, as in *The balloon burst*, or if the event has a natural culmination, such as *I wrote a poem*, *He fell asleep*, or *He read the book*, the situations will be interpreted as completed. Adverbials can be added to indicate specific lengths of time, *for three hours*, or a particular period of time, *yesterday*, or at a particular time, *at midnight.*

To indicate that an activity occurred regularly or repeatedly in the past, we can use adverbials that denote repetition, e.g., *I walked to school* ***every day***. Generally, though not necessarily, this will be interpreted to mean that I no longer walk to school. If we wish to indicate the period during which these walks took place we can add an adverbial denoting a period of time, e.g., *as a child*. If the situation continues through the time of utterance, we can add an adverbial to that effect, e.g., *as I do to this day*.

In texts it is not unusual for a time to be established early, and if that time is in the past, then succeeding clauses are likely to be in the past tense. For example, in the following text the first sentence establishes the 19th century as the time reference; as a result, the verb (bolded) in each succeeding clause is in the past tense:

> The 19th century has been called the "linguistic century." During that time scholars **carried** out a great deal of research into the dialects of several European languages. They **explored** the historical relations among the languages of Europe and parts of Asia, and **developed** concepts that are still in use. In short, 19th century philologists **laid** the foundations of modern linguistics.

A number of researchers have argued that the past tense indicates "distal events," by which they mean situations or events removed in one way or another (not just in time) from the current situation, for example, hypothetical or conditional situations:

(2) a. If I **were** a rich man, I'd buy an Aston Martin.
b. If wishes **were** horses, beggars would ride.

In conditionals the past tense may be chosen instead of the present to give the impression that the condition is unlikely to be fulfilled. Compare:

(3) a. If he **has** time, John **will** volunteer at the homeless shelter.
b. If he **had** time, John **would** volunteer at the homeless shelter.

Sentence (3a) represents a condition that is more likely to be true than the condition represented in sentence (3b).

Distancing oneself from what one is saying can be used also to indicate politeness or deference. Compare:

(4) a. I **wonder** if I **can** borrow your car.
I **want** to ask you whether your class **is** full.
b. I **wondered** if I **could** borrow your car.
I **wanted** to ask you whether your class **was** full.

The bolded verbs of the (4a) sentences are in the present tense while the bolded verbs of (4b) are in the past. We hope you will agree that the (4b) sentences are more deferential than the (4a) sentences.

We can also put wishes and desires under the heading of "distal events." These are distal because they are removed from actuality. We regularly find the past tense after verbs such as *wish*: *I wish I **had** more money*. In this sentence, even though the wish is to have more money now and in the future, the verb *had* is in the past tense.

Exercise

The following text is from the novel, *Gilead,* by Marilynne Robinson (2006: 75-6). (a) Identify all the past tense verbs, both regular and irregular in the passage. (b) Discuss each one using the framework for understanding past tense presented in the discussion just above. (c) You should also note that the excerpt includes present tense verbs in addition to the past tense ones. Why do you think the author shifts from past to present tense when she does? (d) The past tense is the basic, most frequently used tense in this novel. Why do you think that a writer might choose the past tense as the basic one for a novel?

> My father was born in Kansas, as I was, because the old man had come there from Maine just to help the Free Soilers establish the right to vote, because the constitution was going to be voted on that would decide whether Kansas entered the Union slave or free. Quite a few people went out there at that time for that reason. And, of course, so did people from Missouri who wanted Kansas for the South. So things were badly out of hand for a while. All best forgotten, my father used to say. He didn't like mention of those times, and that did cause some hard feelings between him and his father. I've read up on those events considerably, and I've decided my father was right. And that's just as well, because people have forgotten. Remarkable things went on, certainly, but there has been so much trouble in the world since then it's hard to find time to think about Kansas.

The simple present/non-past tense

Forms

Pronunciation

The English simple present tense has two forms. One is created by adding the suffix {-s} to the word stem if the subject it agrees with is third person, singular; for example, *She read**s** very quickly*. With other subjects the form used is the uninflected form; for example *I/you/we/they **read** very quickly*.

The {-s} suffix has three allomorphs: [s], [z], and [ɪz] or [əz]. [ɪ/əz] occurs when the verb ends in a sibilant consonant, e.g., *passes*; [s] occurs when the verb ends in a voiceless non-sibilant, e.g., *pats*; and [z] occurs when the verb ends in a voiced non-sibilant consonant, e.g., *pads* and *paws*. Remember, we

are describing the pronunciation here, not the spelling.

Spelling

The present tense marker is spelled in a variety of ways, too. If the word ends in <s, z, sh, ch, x, o>, then it is spelled <es>: *passes*, *waltzes*, *crushes*, *catches, xeroxes*, *echoes*, *vetoes*; if the word ends in a consonant followed immediately by <y> then change <y> to <i> and add <es>: *empty*, *empties*; otherwise it is spelled <s>: *gets*, *steps*.

Meanings

The simple present tense indicates that a state of affairs holds at the time of utterance. The situation may extend indefinitely far into the past and/or into the future. All the present tense indicates is that the description applies at the time of utterance. However, this meaning interacts in interesting ways with the semantics of the main verb, and the present tense is used conventionally for certain types of contexts and purposes, even when present time is not intended.

Present tense of state verbs

The present tense interacts semantically with verb class, particularly with state and activity verbs. We will begin by illustrating the present tense with state verbs as these are simpler. For example, *Jordan is ill* merely asserts that Jordan is ill as the utterance is spoken. He may have been ill for an indefinite time in the past, he may be ill for an indefinite time in the future, or he may have just become ill and may recover immediately. We can demonstrate that the present tense is indifferent to the length of time that a situation lasts by showing that it is compatible with contradictory adverbials of time. Compare *Jordan is ill; he's been ill for years now and it seems that he'll be ill for years to come* with *Jordan is ill; he got a sudden fever which will disappear as rapidly as it came*.

There are several kinds of state verbs, of which *be* is the most frequent. Other state verbs in the present tense are interpreted pretty much as *be* is, that is, as denoting a time that extends through the time of utterance and indefinitely far backwards and forwards. For example:

Relationship verbs:

Leonardo owns a Ferrari 500 F2.
Mia resembles her mother.

Emotion and feeling verbs:

I love my mother.
I feel pretty, oh so pretty.

Sense perception verbs:
I taste the saffron.
I hear it now.

Cognitive state verbs:
I know how to cook paella.
I doubt his story.

Because the simple present of state verbs denotes a state of affairs which includes the present time but may extend indefinitely into the past or the future, we can indicate the extent of the time involved by adding various temporal adverbials, such as *now*, *these days*. For example, *She loves you now but it won't be for long, We all live in a yellow submarine these days*, *We are here now but we're leaving shortly*.

Present tense of activity verbs

With activity verbs the present is interpreted somewhat differently. *I exercise* denotes a series of events rather than a single exercise event. The series may extend indefinitely into the past and the future. Even though I may not be exercising as I utter the sentence, the period of time occupied by the series includes the present time. So, activity verbs in the simple present can denote repetitions of events that overlap the present time. This usage is often referred to as the **iterative**.

Temporal adverbials may be added to indicate how regularly or frequently the events take place (*everyday*, *regularly*, *frequently*), when they occur (*at noon, whenever I feel like it*), when they begin (*from 6 a.m.*), when they end (*till late at night*), and how long they last (*for an hour*, *while watching The Young and the Restless*). For example, *I exercise everyday for an hour from 6 to 7 a.m.*

Many textbooks claim that the present tense of activity verbs denotes habitual or regular actions. However, their examples typically include adverbials indicating regularity or habituality. The present tense itself says nothing about frequency or regularity; the adverbials do this. One can say without contradiction, *I exercise, though neither frequently nor regularly*.

Timeless truths

The simple present is used also for "universal or timeless truths," permanent

states of affairs, such as, *A square has four equal sides, Dogs bark, Tigers are dangerous, Verbs denote activities and states*. This usage is used by lexicographers in defining words in dictionaries and by textbook writers to explain technical terms, as a quick review of this book will show.

Exercise

Dictionary definitions are often expressed with the simple present tense. Find five words in your dictionary that are defined using the simple present tense.

Closely related to timeless truths are states of affairs that are treated as if they were permanent, such as *New York lies along the Hudson*, *The Eiffel Tower stands in central Paris*. We know New York has lain along the banks of the Hudson for as long as it has existed and that the Eiffel Tower has stood in Paris since it was built, and if we expect no change in these locations, we can use the simple present.

Play-by-play

The simple present can be used for "play-by-play" commentary (a.k.a. "*in situ* narrative") on sports or ceremonies. In this use, activity verbs denote events that are almost simultaneous with the utterance that describes them: *McCool **steps** into the ring. He **looks** his opponent in the eye. Ripkin **swings** and . . . **misses**. Ronaldo **shoots** and **it's** a goal.*

Related to the play-by-play usage is a speaker's commentary on what they themselves are doing. For example, when a speaker is demonstrating something, say, following a recipe, they may use the simple present: *I now **add** the crushed garlic and the chopped onions*. Or in relatively formal business letters, one may write: *I **enclose** my check for $50.00*.

Historical present

To communicate immediacy, the present tense is often used to refer to past events in narratives and stories, a use that is often referred to as the historical present, for example, *So the cop **comes** over to us and **says** . . .*

Scheduled events in the future

The simple present may also be used to denote future scheduled or planned events: *Tom leaves for Dallas tomorrow*. Adverbials indicating when the event is to take place may be included. In the example above, no repetition of

events is denoted, but other examples may be interpretable as denoting either a single future scheduled event or a series of events: *Flight 1750 leaves at 6 p.m.* unless a unique time is understood from the context or specified in the sentence: *Flight 1750 leaves at 6 p.m. tomorrow*.

This usage is not possible with events that are not schedulable. For example, *It freezes tonight* is strange because, even if the freeze were accurately and confidently forecast, it is still not scheduled. However, even though scheduling is typically done by humans, nature may be regular enough so that certain events may be regarded as scheduled. We can say, *El Niño returns next year* during the year prior to when we know that phenomenon regularly returns.

However, Comrie (1985: 47 fn 15) points out, sentences like "*The train departs at five o'clock tomorrow morning*" is not synonymous with sentences like "*The train is scheduled to depart at five o'clock tomorrow morning*." The first "does say explicitly that the train will depart at the said hour, and moreover that this is the result of scheduling; the latter, however, says only that according to the schedule five o'clock is the train's departure time, but does not say that the train will in fact leave according to that schedule." So there is no contradiction in saying *The train is scheduled to leave at five o'clock tomorrow morning, but in fact it won't leave till six*, but it is contradictory to say *The train departs at five o'clock tomorrow morning, but in fact it won't leave till six*.

Performatives

Performatives (utterances that name the verbal act as they are performing it, such as, *I **admit** that I am guilty*, which both admits and names the admitting) always occur in the simple present tense because their effect coincides with the time of the utterance. Performative utterances often contain such adverbs as *now* and *hereby*: *I now pronounce you husband and wife*, *I hereby declare this park open*. These adverbs indicate the simultaneity between the time of the utterance and the time of its effect. Other performative verbs include *promise*, *reject*: *I promise that I will never do that again, I reject your suggestion that I resign*.

Exercise

1. Collect five naturally occurring sentences referring to scheduled future events and test the claim we have made by checking the tense(s) used.

2. Find five more performative verbs and put them in appropriate sentences. Include *now* and *hereby* to be sure you really have created performative sentences. What happens if you change the simple present to another tense and/or aspect?

Reviews

Reviews of books, records, videos, movies, software, and the like are primarily (though certainly not exclusively) written in the simple present. For example, *This review, therefore,* ***describes*** *not only the contents. . .* (College English 40, 1: 72). *The book* ***is*** *suitable for students. . .* (Language 73, 4: 862).

Reporting verbs such as *say*, *suggest*, and *claim* generally occur in the simple present in reviews to represent what the author of the reviewed item has written: *In a recent book on literacy, for example, Baynham (1995)* ***suggests*** *that literacy always serves social purposes. . .* (TESOL Quarterly 30, 1: 163).

Exercise

Pick a review from any of the journals in the fields of TESOL, linguistics, or English studies and identify the reporting verbs and the tenses they occur in.

Hear and tell

In ordinary conversation when we want to report what someone recently said to us, we can use the simple present of verbs such as *hear* and *tell*: *I* ***hear*** *you passed your exams, Maya* ***tells*** *me that you have been ill.*

Exercise

The following text is from the novel, *Mr Phillips,* by John Lanchester (2000: 28). (a) Identify all the simple present tense verbs, both regular and irregular in the passage. (b) Discuss each one using the framework for understanding present tense presented just above. (c) You should also note that a few past tense verbs also occur. Why do you think the author shifts to the past tense as he does? (d) While the past tense is the basic, most frequently used tense in novels, the basic tense of this novel is the present tense. Why do you think that the writer might have chosen the present tense as basic for this novel? To help you answer this question, you might change all the present tense verbs into the past

tense and then compare the two versions of the passage.

> At about seven o'clock, Mr Phillips hears the dustbin lorry turn into the far end of the street. The dustmen call to each other, shout, bang bins, swear, make noises that are associated with the effort of heaving bags up onto the back of the cart, all the sounds which are always different but always the same. The lorry is part of its being Monday, a process which started last thing on Sunday night with remembering to put out the rubbish—which is more complicated than it once was, since the council now recycles rubbish, and there are different-coloured plastic bags and different weekly schedules for paper and plastics and bottles. Cardboard, however, you still have to either put in with the normal rubbish or take it up to the council dump by the dog track, which Mr and Mrs Phillips have formally decided, after doing it what felt like a million times, they can no longer be bothered to do.

The future

The grammar of the future is more complex than that of the past or present tenses. There are several grammatical forms, each with different interpretations. In English, these forms are not inflectional. The most important one (the *will* future) is created with a modal verb. The fact that the main English future is modal has led some linguists to claim that English has no future tense. This is certainly true if by "tense" we mean *inflected* verb forms denoting future situations. However, English has several grammatical means of indicating futurity.

As you might expect but probably didn't think to put it quite so oddly, "the future is what now is prior to" (McCawley 1981: 341), and the grammatical future forms locate "situations in time subsequent to the present moment" (Comrie 1985: 43).

However, the future is conceptually different from the present and the past. Arguably, there is only one actual past and one actual present, but there are many futures. There is the future that we have planned, the future we predict, the future we wish for, the future that we have to bring about, and lots of others. And, of course, there is the future that will actually occur, although, as McCawley remarks, "[t]he notion of 'actual future' may give one a queasy feeling, in view of the fact that one has very little conception of which of the infinitely many possible futures is the actual one; . . . Nonetheless, speakers of natural languages frequently indulge

in the rashness of making statements that purport to describe the actual future" (McCawley 1981: 342-4). So, there are lots of possible futures, which is why it makes a great deal of sense for a language to use its modal system as its main grammatical way of denoting futurity. In this section we describe the various grammatical forms used to denote future in English and the particular kinds of futures each denotes.

Will

Forms

The form often called the "simple future" is created by using the modal verb *will* followed by an uninflected verb form: *Jake* ***will bring*** *it*. Sometimes, especially in formal contexts and in British English, *shall* may be used instead of *will* when the subject of the sentence is first person (*I* or *we*): *I shall return*, *We shall overcome*.

Meanings

The *will* future simply indicates that a situation will obtain in the future relative to the time of utterance. When the situation begins and how long it lasts are irrelevant to the *will* future. It is compatible with situations that began in the past, held through the present, and will continue indefinitely into the future: *Deborah still loves Raymond and will love him forever*. In this example, *still* indicates that the state of affairs, *Deborah loves Raymond*, held in the past and has held up to "now." *Forever* obviously indicates that the situation will continue indefinitely.

The *will* future is also consistent with situations that begin and end within a very short time in the future: *The clock will chime once at exactly midnight tonight*. When a state of affairs begins and ends can be indicated by various temporal adverbials.

How long a state of affairs lasts may also be indicated by the nature of the main verb, specifically by whether or not it is punctual, as well as by various adverbials: *The balloon will pop presently*, *Timothy will remain in prison for the rest of his life*. *Pop* denotes an event that takes no more than a moment of time; *remain* denotes a state that occupies an indefinite period of time.

The *will* future is compatible also with events that occur at specific times in the future: *I'll give you your money at noon tomorrow*. It is also compatible with vague times: *The Earth will certainly be hit by a large meteor, but we have no way of knowing just when that will happen*.

Like the present and the past, the future interacts with the type of main verb involved. With state verbs, the *will* future indicates an unchanging

state of affairs that will hold in the future; context or adverbials may indicate when it began or when it will end: *He will be here tomorrow from 3 to 4 p.m.*

With activity verbs, the future can denote either single or repeated occurrences of events. Just which is determined by other parts of the sentence, such as an object or a temporal adverbial: *He will eat a sandwich*, *He will sing a song*, *He will eat sandwiches (every day for the next week, just as he did this week)*.

Whether an event recurs regularly and habitually is independent of the future tense marker. Habituality is indicated by objects or adverbials*: I will be late for class* ***every day next week,*** *I will go to* ***an occasional movie*** *next year*.

Consistent with its denotation of future situations, *will* may be used for intentions, predictions, conditions, requests, offers, and promises:

Intentions:	*I'll stay for the entire week! We won't forget to write to you.*
Predictions:	*You will enjoy good fortune throughout your life*.
Conditionals:	*If the rain continues, the river will overflow its banks*.
	When the weather warms up, people will throng to the beaches.
Requests:	*Will you bring the beer this time?*
Offers:	*I'll bring the beer, if you want*.
Promises:	*I'll bring the beer, I promise*.
	I promise that I'll be on time next time.

The forms of *will* can occur in elliptical responses: *Will you, Heather, have this man, Henry, to be your lawful wedded husband? I* ***will****. Don't be late! I* ***won't****.*

Be going to V

Form

This future form is created with the expression *be going to* followed by the uninflected form of a verb: *Jake* ***is going to leave*** *soon*.

If the *be* is the first auxiliary verb in a tensed clause, it must be inflected to indicate the person and number of its subject as well as the tense of the clause. It may be inflected for present or past tense. With the past tense we create a "future of a past": *John was going to leave, but he missed his plane*.

Stylistically, *be going to* is less formal than *will* and is more frequent in conversational than in written English. It is often pronounced [gənə],

which is typically spelled "gonna."

Meanings

Be going to communicates a more certain future than *will*, either because the speaker strongly intends to bring that future about or it has already been planned: *I am going to finish this if it kills me*. *It's all arranged; I am going to fly to Los Angeles next week.*

The future may also be quite certain because it results from causes operating in the present: *The temperature is dropping; it's going to snow*. *He's 12 points ahead; he's going to win the game*.

When used to express the future result of a current cause, *be going to* communicates an inference that the result will occur almost immediately. This suggestion of immediacy appears to be due to pragmatic factors. If the result is not going to be immediate, then the speaker may override the inference with a temporal adverbial such as *next month*, *next year*, *in 2009*. For example, *Current weather trends indicate that we are going to have very cold weather next week/month/year*.

In spite of their differences, *will* and *be going to* are often interchangeable without much apparent effect, for example: *They will be in the hospital for ten days/They are going to be in the hospital for ten days*. *I think it'll rain/I think it's going to rain*.

In other cases, substituting *be going to* for *will* causes significant changes of meaning. For example, expressing an intention with *will* allows it to be interpreted as an offer: *I'll bring dessert*, whereas expressing that intention with *be going to* suggests a fixed plan: *I'm going to bring dessert*. It may also suggest the speaker's expectation that someone might try to thwart their intention: compare, *I'll answer it* with *I'm going to answer it* when the phone rings. Similarly, substituting *be going to* for *will* in requests and promises causes them to seem either preemptory and intrusive or questions about statements of fact: *Are you going to bring the beer this time? I am going to help you on Saturday (whether you like it or not)*.

In some contexts, substituting *will* for *be going to* results in ungrammaticality. Compare *If it's going to rain, you should bring an umbrella* with * *If it will rain, you should bring an umbrella*.

In continuous text *be going to* and *will* may sometimes alternate in any order: *It'll be cooler tomorrow, because it's going to be cloudy in the afternoon*. *It's going to be cooler tomorrow, because it'll be cloudy in the afternoon*.

Present progressive

Just like the simple present tense, the present progressive with an appropri-

ate temporal adverbial may also be used to express a planned future event: *I am having a birthday party this year. Grandpa is coming to visit next week. John is leaving on the six o'clock bus.*

Modals

We can use modal verbs + infinitives to express how likely a future situation is: *I will/may/might leave*. Or whether it is required: *I must/should leave*. Or permitted: *I may leave*. Or (physically) possible: *I can lift that for you*.

Exercise

The following paragraph is (a slightly amended) part of the small print from an advertisement for a Southwest Airlines Visa card that appeared in *Newsweek* (January 21, 2008: between pp. 52-3). (a) Identify all of the expressions in the paragraph that refer to future time. (b) When is that future time? (c) Why is *will* used as the primary expression referring to the future in this paragraph? (d) Besides being part of an ad, what other genre(s)/domain(s) does this paragraph belong to? (e) Why do you think the *will* future is appropriate for that/those genre(s)/domain(s)? (f) There are several clauses/sentences that do not refer to future time. Identify those clauses/sentences and identify their tense(s). Discuss why the writer(s) of this text used those tenses where they did.

> You will earn 2 Reward Dollars for each $1 of net purchases made directly from Southwest Airlines, including flight purchases and Southwest Airlines Vacations package purchases. You will earn 2 Reward Dollars for each $1 of net purchases at participating Southwest Airlines Rapid Rewards Preferred Hotel and Rental Car Partners. You will earn 1 Reward Dollar for each $1 of all other net purchases. Each year you will receive 2,400 Reward Dollars (2 Rapid Rewards credits) after your Anniversary. "Anniversary" means the year beginning with the date of your account opening through the first statement after the anniversary of the date of your account opening, and each twelve months thereafter. Once you earn $1,200 Reward Dollars you will receive 1 Southwest Airlines Rapid Rewards credit.

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11 Modifications of Basic Clause Patterns

KEY CONCEPTS
Transformational grammar: deep structure, surface structure, transformations
Movement
Assignment of semantic roles
Deletion
Insertion
Discourse functions of modified clauses

INTRODUCTION

In our chapter on Basic Clause Patterns, we dealt with simple sentences, that is, sentences that contain only one clause, consisting of an NP subject, AUX, and VP predicate. In this chapter we examine sentences in which elements of simple sentences are moved from their canonical positions, are understood even though no words are present, and in which certain kinds of elements are inserted into clauses to fulfill certain functions. In order to explain the phenomena of movement, deletion, and insertion, we will introduce elements from a theory of syntax called **transformational grammar**. Specifically we will distinguish between a clause's **deep structure** (DS), the nature of which we will make clear later, and its **surface structure** (SS), i.e., the form it actually occurs in. We will also introduce **transformational rules**, i.e., the rules that move, delete, and insert linguistic elements in the journey from deep to surface structure. As we go along we will also discuss the discourse functions of the sentence types we introduce. (To follow the development of one strand of transformational grammar see Carnie 2007; Chomsky 1964; Culicover 1976, 1982; Radford 1981, 1988, 1997a, 1997b.)

MOVEMENT

We begin by examining sentence variations that involve the movement of elements from one position to another in a clause. We begin with one of the simplest of these variations—**particle movement**.

Particle movement

Particles are words such as *up* or *over* that may occur as prepositions when they take their own NP objects or as adverbs when they modify Vs or VPs. When these words combine with a verb to create an idiomatic unit, they are called **particles**. For example, combining *look* and *up* creates the **phrasal verb** *look*

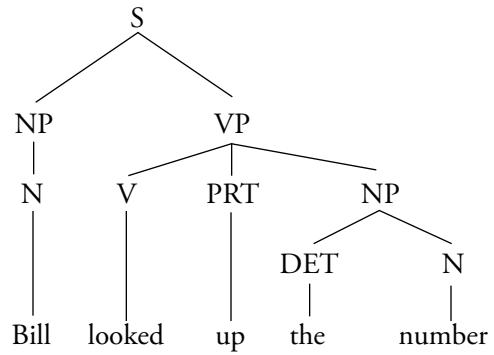
up in the following sentences:

(1) a. Bill looked up the number.
b. Bill looked the number up.

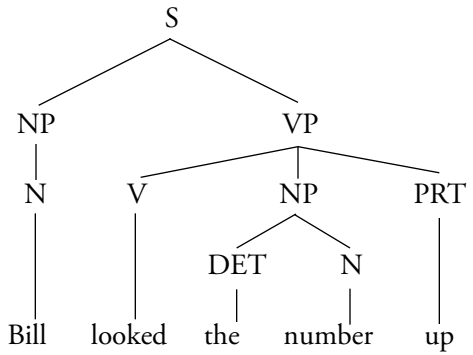
These two sentences differ only in the position of the particle *up*. In the first it occurs between the verb and the object; in the second, to the right of the object. Both sentences contain the same words, and the phrases, particularly the NPs, perform the same grammatical functions in both: *Bill* is the subject; *the number* is the direct object. Moreover, the two sentences are synonymous. By this we mean specifically that the semantic roles (see our chapter on Basic Clause Patterns) assigned to the NPs are the same in both sentences. *Bill* is the Agent and *the number* is the Theme. As native speakers we can assert these facts with certainty, and expect universal agreement among English speakers. Because knowledge of the relationships between sentence pairs like these is part of every native English speaker's competence, it must be expressed in a grammar. At issue is how to do this.

We can assign the following analyses to sentences (1a,b)

(2)a.



(2)b.



These structures can be generated by the phrase structure rules:

(3) a. S ——> NP AUX VP (i.e., S consists of NP, AUX, and VP)
b. VP——> V PRT NP (cf. tree (2a))
c. VP——> V NP PRT (cf. tree (2b))

Now, if the two sentences (1a, b) can be created ("generated") by the rules in (3), why can't we declare victory, leave well enough alone and go on to the next topic? The answer is that while the two rules (3b, c) might be just coincidentally similar, speakers of English know that the sentences they represent are related, that they are variant forms of each other. If we assume that a goal of our grammar is to represent native speakers' linguistic knowledge—their linguistic **competence**—then we have to represent the relationship between pairs of sentence like (1a,b). We will adopt a strategy similar to the one we adopted in phonology and morphology, namely that variant forms (e.g., allophones and allomorphs) are assumed to be different representations or manifestations of the same abstract form. So, (1a,b) are different surface manifestations of an abstract structure that they have in common, much as the allomorphs /s/, /z/, and /əz/ are manifestations of the morpheme {-s}.

This common abstract form is the **deep structure**. The actual strings of words and their structural organizations are the **surface structures**. The deep structure and surface structure of a sentence are connected by transformational rules, or just **transformations**, which move, delete, or insert items.

We will make a few assumptions about deep structures. First, they are created by phrase structure rules (PSRs), like those in (3). Second, elements that are semantically closely related must be syntactically closely related in DS. So, for example, in particle sentences such as (1a,b), because the particle and verb are closely associated semantically, they must be closely associated in DS. Consequently, we should prefer *look up the number* rather than *look the number up* as the DS arrangement of words. Third, as we will discuss in greater depth later, if a verb assigns a semantic role to an NP, then that NP must be in the same clause as the verb.

We have now argued that (2a) represents the DS of both (1a, b). The surface structure of (1a) is identical in all relevant respects to its deep structure. The surface structure of (1b) is slightly different from its deep structure, specifically regarding the position of the particle. We account for this slight difference by hypothesizing a transformation (called **Particle Movement (PM)**) which moves a particle from its deep structure position beside its verb, places it to the right of the direct object, and attaches it to the VP. This

yields the surface structure (2b).

The transformational approach has the advantage of expressing, by the common deep structure, native speakers' knowledge that pairs of sentences like (1a,b) are grammatically related. The grammar represents the two sentences as transformational variants of each other, analogous to the ways in which allophones and allomorphs are related to each other as variants of underlying abstract phonemes or morphemes. Assigning sentences a common deep structure also expresses the fact that the sentences are broadly synonymous with each other, specifically in that a given noun phrase will have the same semantic role in all.

Exercise

1. Create five pairs of sentences analogous to (1a,b), using the particles *up, out, over,* and *on*.

2. Draw the DS and SS trees for each pair.

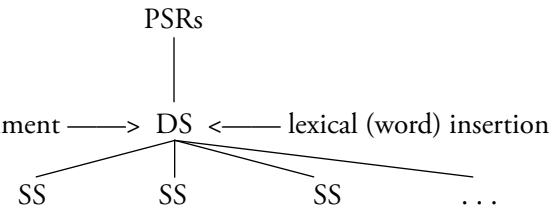
3. What condition must be added to the particle movement transformation to correctly account for the following data?
   a. The witness picked Fred out.
   b. The witness picked out Fred.
   c. The witness picked him out.
   d. *The witness picked out him.

(i.e., what condition must be added to ensure that the grammar does not predict that (d) is grammatical?)

A deep structure expresses what surface structures have in common and provides a basis for movement, deletion, and insertion. Transformations may create multiple surface structures from a single deep structure.

A simplified, overall model of a transformational grammar is:

(4)



A note on the discourse functions of particle movement

Particle movement has no effect on the meaning of sentences to which it has applied. The semantic roles of the NPs in the sentences affected by PM are exactly the same as those in sentences unaffected. Are both sentence types freely interchangeable in all contexts then?

The answer to this should be clear from the exercise above. PM is generally optional but it *must* apply if the object is a pronoun. It seems plausible to assume that at least one factor in determining where to place the particle is the informational status of the object NP. If the NP represents old, known, or given information (and pronouns are typically in this category), then the particle moves to the right. If the NP represents new information, the particle is placed between V and NP. This is an example of the interaction between the syntactic and pragmatic components of the grammar.

Another factor, and probably the more important one, is the length of the object NP. The longer the NP the more likely the particle is to appear before, rather than after it, as the following sentences show:

(5) a. He looked it up.
b. He looked the number up.
c. He looked his boss's number up.
d. ?He looked the number that he had written on the back on a match book up.
e. *He looked the number of the house where the cat that killed the rat that ate the malt lived up.
f. He looked up the number of the house where the cat that killed the rat that ate the malt lived.

These examples illustrate the effect that length (or **weight**) can have on where a phrase can occur in a sentence.

Teaching phrasal verbs

We include this brief section primarily for teachers of ESL students because phrasal verbs can present them with significant difficulty, primarily because they are unusual in the languages of the world, but also because of their idiosyncratic syntax and idiomatic characteristics.

Phrasal verbs consist, as we have seen, of a verb and particle. Their semantics is often idiomatic; that is, the overall meaning of the phrasal verb cannot be determined from the typical meanings of the verb and particle, for example, the "provide care for" meaning of *look after*.

There are several syntactic classes of phrasal verbs for students and teachers to contend with:

(6) a. Intransitive: *give in, move on* (Because these have no direct object, PM is impossible.)
b. Transitive with optional PM: *bring back*, *look up, cut out*.
c. Transitive with obligatory PM: *shut someone up*, **shut up someone*.
d. Transitive with prohibited PM: *do without something*, **do something without*.

Good learners' dictionaries (e.g., Cambridge International Dictionary of English) provide useful expansions on this necessarily brief discussion.

ASSIGNMENT OF SEMANTIC ROLES

Topicalization

Phrases are assigned **semantic roles** by virtue of their grammatical relations within the sentence, specifically by virtue of their relation to a verb, preposition, or noun. Many, but by no means all, current theories make the assumption that an NP can be assigned *only one* semantic role in any clause. In the interests of simplicity we will adopt that assumption in this section.

We will assume also that, with very few exceptions such as expletive *it* and *there*, EVERY NP in a sentence must be assigned one but no more than one semantic role. Consider now the sentences:

(7) a. Bill carried Mary.
b. Mary, Bill carried.

In both of these sentences *Bill* is the Agent and *Mary* is the Theme. Note however that *Mary* occurs in two different positions in these sentences. In (7a) it occurs in the direct object position; in (7b) it is in what is known as the **topic position**. Speakers of English know that both of these sentences denote that Bill carried Mary. Let's assume that we have a rule whereby *carry* assigns Theme to its direct object in sentences like (7a). Must we now assume that we need another rule to account for the assignment of Theme to *Mary* in the topic position? Let's examine that possibility. Such a rule might say: *assign Theme to the NP directly to the left of the subject of the clause in which the assigning verb occurs*. However, when we examine some more data we can see that this becomes impossible.

(8) a. Mary, Fred thinks that Bill carried.
b. Mary, Susan believes that Fred thinks that Bill carried.
c. Mary, I know that Susan believes that . . . that Bill carried.

Exercise

Insert 1, 2, and 3 further expressions of the form *NP Vs that* in the position occupied by the ellipses in (8c).

In each of the sentences of (8) *Mary* is understood as the Theme of *carried*. But we can insert as many *that*-clauses between *Mary* and *carried* as we wish. There is no principled bound to the number of such clauses. It follows that for an infinite number of sentences we would need an infinite number of rules to assign Theme to *Mary*. Clearly such a set of rules could not exist in anyone's mind. We must therefore find an alternative way of assigning a semantic role to all these different (but related) positions.

Rather than devise a complex set of rules that would directly assign Theme to *Mary* in all these positions, linguists have simplified the assignment process by assuming something like the following: *a verb such as* carry *assigns Theme to its* ***deep structure*** *direct object*. This phrase may afterwards be moved by transformations, though it will always be associated with its original, deep structure, position and therefore with its semantic role.

In support of this idea, note that we cannot put another NP into the object position and still interpret the resulting S as *Mary is carried by Bill*.

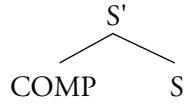
(9) Mary, Bill carried Susie.

We can only interpret *Mary* in (9) as an addressee and not as a direct object. *Susie* has taken over that role. Because *Mary* can no longer be associated with the DO position it cannot be interpreted as Theme. So the deep structure position with which a moved phrase is associated and from which it derives its semantic role must be empty.

Let's now think about the position that the topicalized phrase occupies in surface structure. There are various possibilities. One is that topicalization inserts the topicalized phrase directly under S. However, we will introduce a new node, **COMP** (for **COMPLEMENTIZER**), which requires a special phrase structure rule to generate it:

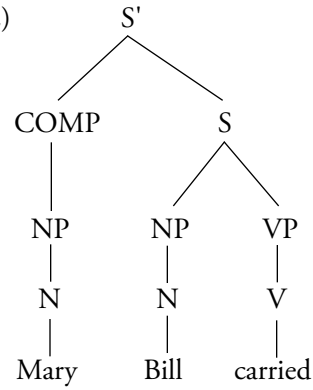
(10) S'——> COMP S (S' is pronounced as S-bar)

(11)



We will assume that topicalization inserts the moved phrase into COMP. The surface structure of (7b) would therefore be represented as:

(12)



COMP is a position outside of S that occurs in every S'. It is never assigned a semantic role directly. A phrase in COMP acquires its semantic role by virtue of its association with some deep structure position. This association is represented by the transformation that moves the phrase. As every NP must be assigned a semantic role, it follows that there can be no NP in COMP in deep structure. We will call positions that cannot be assigned a semantic role directly in DS **non-argument positions**. This is often abbreviated as **A'** (read A-bar) in the literature. **Argument (A-) positions** are those positions within S to which semantic roles *may* be assigned in deep structure. They include, as you no doubt guessed, subjects, objects, and objects of prepositions. We will discover later that while these positions may be assigned a semantic role, they occasionally are not. So topicalization moves a phrase from an A position to which a semantic role has been assigned to an A' position.

Besides moving an NP, as in the examples above, topicalization can move any phrase to COMP:

(13) a. *Mary*, I like. (NP topic)
b. *Into the valley of death*, I will not go. (PP topic)
c. *Intelligent*, he is not. (AP topic)
d. I said that Fred would go home, and *go home* he will. (VP topic)

e. *Quickly* she left. (AdvP topic)

Exercise

1. Draw the deep structure and surface structure trees for each sentence in (13).

2. What PSRs created the DSs?

3. Describe the changes that the topicalization transformation makes to the DS as it changes it into the SS.

Discourse functions of topicalization

Every native speaker of English knows that topicalized and non-topicalized sentences express essentially the same message: the semantic roles of the various NPs in the sentences are unchanged by the movement. There is nonetheless a difference between the two forms. The non-topicalized is a more general-purpose construction than the topicalized, which we would use only in special contexts.

The most typical reaction speakers of English have upon hearing sentences such as:

(14) The forks, you put on the left.

is that the entity or entities referred to by the topic NP, *the forks*, have already been introduced (directly or indirectly) into the discourse. So (14) might occur as the answer to:

(15) Which side do I put the forks on?

A second and closely related use of topicalized sentences is to refer to an entity that is a member of a set of related entities that has already been introduced into the discourse. A typical other sentence to go along with (14) might be:

(16) and the knives you put on the right.

Knives and forks are members of the set of silverware items, and if you came upon a conversation in which (14) was the first sentence you heard,

you could reasonably assume that the speakers had already mentioned silverware, and one speaker was now listing the individual members of the silverware set and telling a child (for example) where each one goes in a place setting. So, the NP in topic position can refer to a member of a set of items that has already been introduced into the discourse.

Just to show you that we're not simply making this up out of hot air, consider the following authentic example.

(17) He'd have been lucky to get thirty percent . . ., **sixty one, Snow gave him** (Le Carré 1962/1980: 74)

Here the topic is a student's grade. Thirty and sixty one percent are members of the set of possible grades. Sixty one can be topicalized because it is a member of the already mentioned set and contrasts with thirty.

To sum up our discussion of topicalization: topicalization moves any phrase from its position within S to the COMP position. The moved phrase retains the semantic role it was assigned at deep structure. The old position may not be filled with another phrase. No morphological changes occur either to the moved phrase or to other elements of the sentence. Topicalization is used to refer to entities that are members of sets or lists that have already been introduced into the discourse (Ward and Birner 2001).

Subject-auxiliary inversion

As we noted in our chapter on Basic Clause Patterns, the order of subject and first auxiliary verb is reversed in yes/no questions (18a-f), and sentences that begin with negative adverbs such as *rarely* (19):

(18) a. Can I have another go?
b. Have you taken the trash out?
c. Are you leaving now?
d. Will you be OK?
e. Were you hurt in the accident?
f. Could I have forgotten my keys again?

(19) Rarely have I seen such a magnificent sunset!

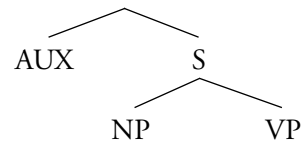
As you recall, the immediate constituents of S are NP AUX VP. Using these as our base, we can relate a yes/no question to its declarative counterpart by assuming that both have the same deep structure (NP AUX VP), and that there is a transformation (called **Subject/Auxiliary Inversion (SAI)**) that moves AUX to the left of the subject in the question (AUX NP VP).

We will assume that a moved AUX is **adjoined to S** rather than just inserted directly under it. Adjunction to S involves first creating a second S node above the original one and then inserting AUX (or more generally the adjoined phrase) under the newly created node. SAI applies to (20a) to give (20b):

(20)a.



(20)b.



The technical reasons for adjunction need not detain us here.

Exercise

Draw the deep and surface structure trees for the sentences in (18) and (19). Describe what the SAI transformation does to the DS tree to create the SS tree.

In our chapter on Basic Clause Patterns, we showed that auxiliary verbs are optional and that when they occur they do so in the order:

(21) (Modal) (Perfective *have*) (Progressive *be*) (Passive *be*)

SAI affects only the first verb in the sequence, regardless of which it is. In fact, we will assume that only the first auxiliary verb is actually in the AUX position when SAI applies. Later in this chapter we discuss the positions of the other verbs. SAI creates sentences such as:

(22) a. Must you leave?
b. Has she left?
c. Is she leaving?

Exercise

Draw tree diagrams of the deep and surface structures of sentences (22a,b,c) above.

If the basic sentence has no auxiliary verb, then we put a form of *do* into the first auxiliary slot (***Do* Insertion** or ***Do* Support**), transfer the tense from the main verb, and apply SAI to it:

(23) a. He works out really hard.
b. He does work out really hard.
c. Does he work out really hard?
d. *Works he out really hard? (cf. German, earlier forms of English, Spanish)

Exercise

What is the DS of (23a, b, c)? Hint: all three have the same DS.

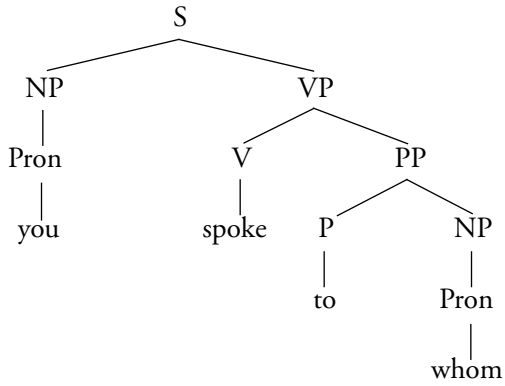
Wh-movement

Relative clauses frequently begin with a wh-phrase. Relative wh-phrases may be NPs (*which*), PPs (*to whom*), and APs (*how tall*). Wh-phrases get moved to COMP from a deep structure position within a clause, as in the relative clause (italicized) below:

(24) The person *to whom you spoke* is no longer here.

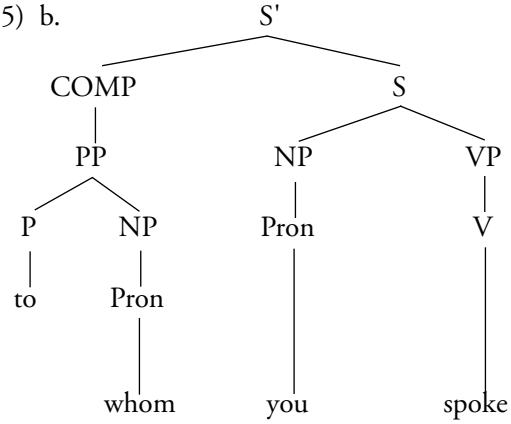
The deep structure of this relative clause is:

(25) a.



The wh-phrase is moved into a COMP by a transformation called **wh-movement**:

(25) b.



Exercise

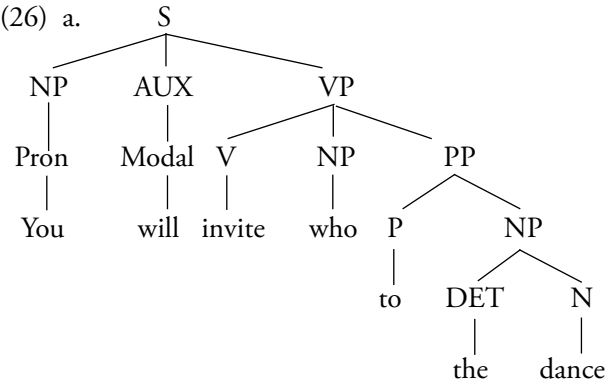
1. Describe what wh-movement does.

2. Draw the DS and SS trees for the following two bracketed relative clauses: *The book [which you wrote], The man [whom you spoke to].*

Wh-questions

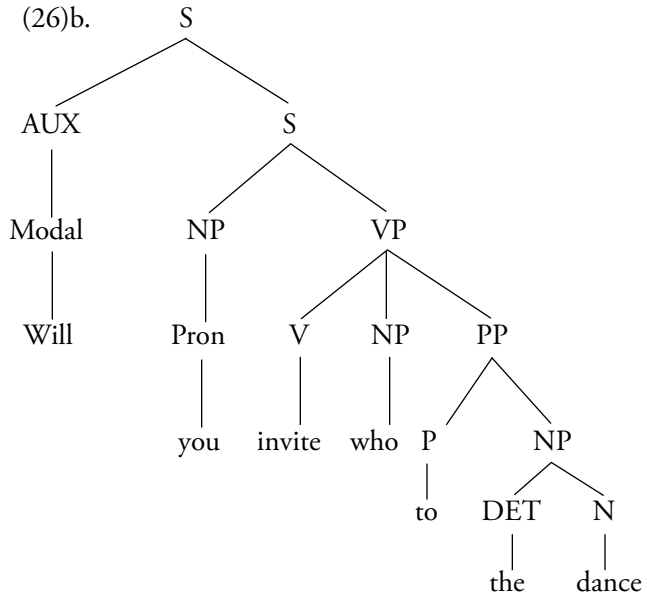
Wh-questions, such as *Who will you invite to the dance?*, which ask for a phrase as a reply, involve two transformations: subject auxiliary inversion and wh-movement. Let's assume that SAI occurs before wh-movement. The deep structure of this question is:

(26) a.



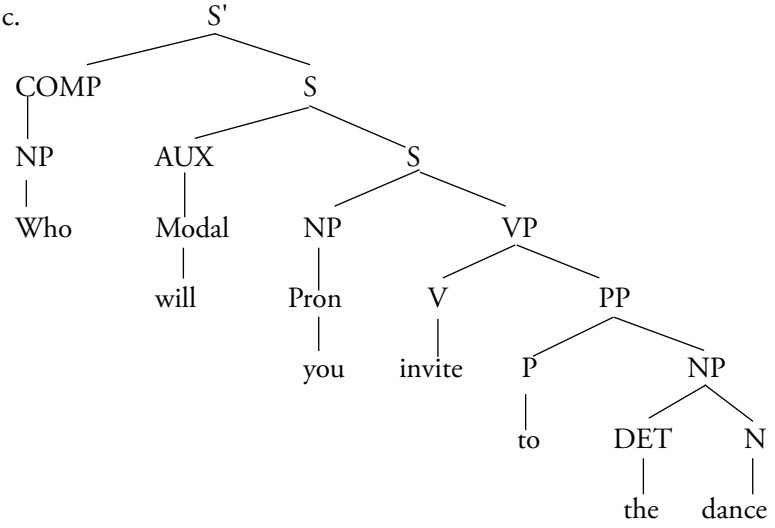
Applying SAI to this creates:

(26)b.



And applying wh-movement to this yields:

(26)c.



Wh-movement may also occur in indirect questions without SAI:

(27) We wondered [what Nancy would say].

Clearly, one or more transformations can apply to derive a sentence's surface structure from its deep structure.

DELETION

Besides moving them around in sentences, transformations may also delete phrases. "Understood" elements in clauses or sentences are typically regarded as having been deleted by a transformation. We briefly examine two deletion rules: Imperative Subject Deletion and VP Deletion.

Imperatives

(28) a. Get out now!
b. Behave yourself! (cf. *Behave herself!)
c. A: Do it! B: No. You do it!

There are reasons to believe, however, that imperatives have deep structure subjects. First, English sentences in general have subjects, and it would be odd if one class of sentences lacked them. Second, and much more convincingly, imperatives interact with reflexive pronouns in ways that would be hard to explain if they had no subject. Consider:

(29) a. Bill shaved himself.
b. You shaved yourself.
c. I shaved myself.
d. They shaved themselves.
e. You shaved yourselves.
f. We shaved ourselves.
g. *You shaved myself/himself/herself/themselves/ourselves.

A reflexive pronoun in the direct object position must agree in person, number, and gender with the subject of its clause. That is, the form of the reflexive pronoun is dependent upon the grammatical characteristics of the subject. Clearly, for this to be the case there must be a subject for it to depend on. Bearing this in mind, consider:

(30) a. Shave yourself/yourselves!

b.*Shave myself/himself/herself/themselves/ourselves.

We can explain this pattern of data by assuming that the deep structure of (30a,b) is:

(30) c. You shave yourself.

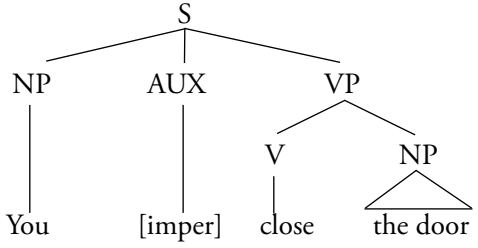
Because the only reflexive that can occur here is the second person reflexive (either singular or plural), the (understood) subject of a reflexive imperative must be *you*. But the subject *you* can be, and generally is, deleted—by a transformation called **Imperative Subject Deletion**.

The AUX of imperative sentences also seems to be special. Non-imperative AUX phrases may contain a modal; an imperative AUX may not, even though an imperative sentence may contain other auxiliary verbs, as the following show:

(31) a. Close the door!
b.*Must close the door!
c.*Will eat your vegetables!
d. Have the dishes washed when I return!
e. Be studying when I return!
f. Be gone by daybreak!

If we assume that the AUX phrase can be occupied by either a modal or a marker that indicates that the sentence is an imperative, then Imperative Subject Deletion will correctly capture the facts. Consequently the deep structure of *Close the door!* is:

(32)



Exercise

Which applies first, Imperative Subject Deletion or the rule that checks that a reflexive pronoun has an appropriate antecedent? Why?

A note on the pragmatics of imperatives

Imperatives are traditionally thought of as the form used for giving orders. Recent research suggests that there is more to be said about them than this, and that they raise interesting issues of language use. Fundamentally, a speaker using an imperative assumes that the addressee will do what the sentence expresses. However, studies of politeness suggest that speakers must concern themselves with their addressee's **face**, that is, their public self-image and desire to be unimpeded (Brown and Levinson 1987). Speakers must be careful not to deny aspects of an addressee's self-image or unreasonably impose upon him or her. Imperatives can only be politely used when they do not violate aspects of an addressee's face.

Addressees can be assumed to be willing to cooperate with speakers without loss of face under several types of circumstances. First, if the speaker has the authority to order the addressee to carry out the act expressed by the imperative. Second, if the addressee can be assumed to want to carry out the act. For example, recipe directions are expressed in the imperative, at least partly because their readers may want to carry out the directions. Similarly, people who have asked for directions can be assumed to want to carry them out:

(33) Take College Blvd. south for three blocks, then turn right on Horsetooth, . . .

Imperatives are polite also in (good) wishes:

(34) a. Get well soon!
b. Have a nice day!

Or in offers:

(35) a. Let me take care of that.
b. Have another piece of cake.
c. Come on in.

Or in warnings:

(36) Watch out!

We hope you remembered that the grammatical categories indicative, interrogative, and imperative belong to the category of grammatical mood.

Exercise

1. From the point of view of the discussion of face, explain why the use of the imperative in the "wish" *Go to hell!* is impolite.

2. The following (slightly adapted) recipe is for a beet salad, taken from *Saveur* (March 2006: 40). Like most recipes it consists of a list of ingredients followed by a list of instructions on what to do with them. And like most recipes, the instructions are expressed in the imperative mood. (a) Identify all the imperative clauses. (b) Write the instruction section below using a mood other than the imperative. (c) Why do you think that the typical mood of the instruction section of recipes is the imperative? (d) What other changes must you make? Why?

FOR THE BEETS:
3 medium beets (1 lb.), trimmed
Salt
¼ cup extra-virgin olive oil
2 tbsp. balsamic vinegar
Salt and freshly ground black pepper
For the beets: Put beets into a medium pot, cover with salted water, and bring to a boil over high heat. Reduce heat to medium-low and simmer until tender, 1½-2 hours. Remove beets from pot, let cool slightly, then peel and cut into 1" chunks. Toss beets, oil, and salt and pepper to taste in a bowl.

VP deletion

Yet another deletion rule deletes the VP of a sentence when it is identical to the VP of a preceding sentence, as in:

(37) a. Fred can go to the movies, and Mary can too.

We understand (37a) as:

(37) b. Fred can go to the movies, and Mary can [go to the movies] too.

If we take (37b) as representing the deep structure of (37a) and posit a transformation that deletes the VP of a second clause (bracketed in 37b) when it is identical to the VP of an earlier clause, then we will have account-

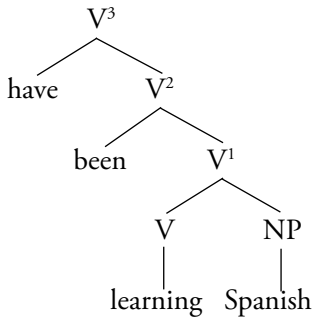
ed for our understanding of these two sentences. In general, deletion can take place when it is possible to figure out easily from the context, linguistic or non-linguistic, just what has been deleted. **Deletion under identity** as in (37a) is a typical case in which the prior linguistic context allows the recovery of the deleted elements.

VP deletion is more complex than we have represented it. When we examine it more closely we discover some interesting things about the structure of the VP, as the following sentences show:

(38) a. John must have been learning Spanish, and Fred must have been learning Spanish too.
b. . . . and Fred must have been too.
c. . . . and Fred must have too.
d. . . . and Fred must too.
e. . . .?and Fred, too.

In sentences (38b-d), respectively, we have deleted [V NP], [been V NP], [have been V NP]. In general, transformations operate on phrases rather than arbitrary strings of words, and if we assume that this must be the case, then each of the sequences [V NP], [been V NP], and [have been V NP] must be a phrase. It follows that VP is composed of several levels of phrase structure, and that VP deletion may apply to any of these levels:

(39)



Some discourse functions of deletion

The fundamental function of deletion is to make processing discourse easier for both its producers and its audiences. The producer has to say or write less; the audience has less to hear and process. Our minds derive inferences (jump to conclusions) more rapidly than they process linguistic input, so deletion takes advantage of that difference in processing speed by reducing linguistic input and allowing the mind to fill in the blanks. And sometimes,

too, to say less is to say more . . .

INSERTION

There are clause types which, under certain circumstances, require the insertion of apparently superfluous expressions. We briefly discuss clauses whose subject is non-referential *there.*

Existential **there** *sentences*

English contains pairs of sentences such as the following, which, like active and passive pairs, are essentially synonymous, but with some subtle differences:

(40) a. A unicorn is in the garden.
b. There is a unicorn in the garden.

The second differs from the first in that its subject contains "existential *there*" (which does not refer to a specific location), and the phrase that corresponds to the subject of the first sentence (*a unicorn*) occurs after the verb *be*. How are we to represent the similarities and differences between such sentences?

As you have probably guessed at this point, a modern linguist is likely to say that they are transformationally related. That is, they both have deep structures similar to (40a), but the derivation of (40b) involves a transformation that moves the subject phrase into the VP and another that inserts *there* into the vacated subject slot.

What gives us the right to say that the NP that follows the verb is the subject in existential *there* sentences, when subjects generally occur before their verbs in English clauses? Normally English verbs agree with their surface structure subjects. In existential *there* sentences, however, the verb agrees with the NP that follows it in surface structure:

(41) a. There are unicorns in the garden.
b.*There is unicorns in the garden.

(41b) is unacceptable in written or formal English, although its contracted form, (42), is acceptable in informal, colloquial varieties:

(42) There's unicorns in the garden.

Some discourse functions of existential **there** *sentences*

No doubt you noticed that the deep structure subject of existential *there*

sentences is typically an indefinite NP. Indefinite NPs typically represent information that is assumed to be new to the audience, and typically is placed later in sentences. Old information is generally expressed early in a sentence, often in the subject. Topics are generally old information, and so are frequently expressed in the subject phrase. Obviously, discourse must have ways of introducing new topics, and existential *there* sentences, by placing the new topic after the verb, are a natural way of accomplishing this. They are also used to assert the existence of entities and to summarize information (Huckin and Pesante 1988).

Exercise

1. Identify the DS and SS of:
   a. There is a house in New Orleans.
   b. There is a god.
   c. There may have been water on Mars.

2. Apply *there* insertion to:
   a. A solution is available.
   b. A skeleton was in the closet.
   c. Pilgrims may have been here in the past.

PASSIVE

We introduced the passive voice in various other chapters, so here we begin with a functional description:

(43) Subject Be Ven (Agentive phrase)

Passive sentences include some form of the verb *be* followed by a verb in its past participle form. Passives may include an agentive (*by*) phrase. Formally they consist of:

(44) NP AUX $[_{VP}$V+en (by NP)]

For example:

(45) a. The children were fed by the baby-sitter.
b. The pretzels were eaten by the mice.
c. The children were fed.

d. The pretzels were eaten.

As a general rule, passive sentences have active counterparts, although a missing agent phrase may have to be expressed as an indefinite pronoun:

(46) a. The baby-sitter fed the children.
b. The mice ate the pretzels.
c. Someone fed the children.
d. Someone/something ate the pretzels.

The active subject corresponds to the NP in the passive *by*-phrase, and the passive subject corresponds to either a direct or indirect object in the active:

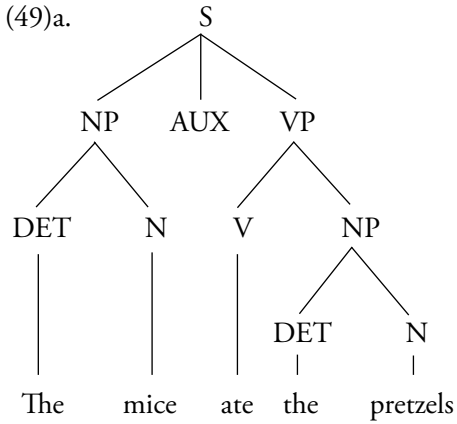
(47) a. The package was sent to Amanda.
b. Amanda was sent the package.

Or occasionally to the object of a preposition:

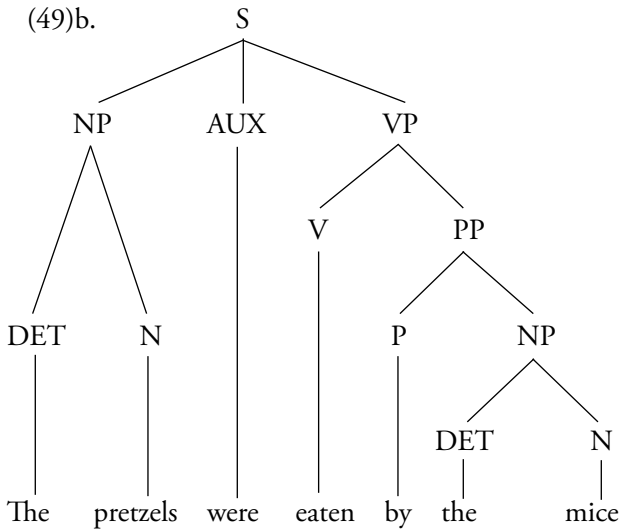
(48) My bed has been slept in.

In the kind of analysis we are using here, the deep structures of synonymous active and passive sentences are taken to be identical, and the passive transformation (a) creates the *by*-phrase, (b) moves the subject NP into it, (c) moves the direct object NP into the now-vacant subject position, (d) inserts the verb *be*, and (e) changes the morphology of the verb to the passive participle form. The deep structure of (45b) and (46b) is:

(49)a.



(46b) results when the passive transformation does not apply to (49a); (45b) results when it does. The surface structure of (45b) is:



A note on the use of passive sentences

Style manuals and many school grammars and composition textbooks advise students (and writers generally) to avoid the passive. However, research has demonstrated that student writers use the passive less often than expert writers (Garvey and Lindstrom 1989). It would appear therefore that what students need to learn is how to use the passive appropriately, a piece of advice that applies to all sentence types.

There are two major traditional objections to passives. First, they are alleged to be deceitful: they can and often do omit reference to the agent responsible for an event. Second, because they begin with an NP whose semantic role is not an Agent and include a form of *be*, they are alleged to be "weak."

In response to the first objection we say that omitting pieces of sentences is not something that only passives can do. Many if not all sentence types can. So in this regard writers need to decide just what information must be presented and what can be omitted from a text. This is a matter of audience, not just of grammar.

In response to the second objection, most languages of the world have constructions that correspond to the English passive. It would be most unlikely for these constructions to have developed and been retained if they were not of considerable value. What they do is allow the information rep-

resented in the active to be restructured. Because old, familiar, or given information tends to be placed before new information so that it can be easily connected with its prior context, passive allows old information that would be placed later in the corresponding active to be appropriately placed earlier. Additionally, **truncation** (deletion) of the agentive phrase from a passive allows speakers and writers to efficiently avoid repeating information that may be readily derivable from the context. Omission of the agentive phrase also allows scholars a polite way to criticize each other (Meyers 1989).

In fact, all languages provide means to allow information to be restructured. In English alone we have at least the following:

(50) a. The mice ate the pretzels. (Active)
b. The pretzels were eaten by the mice. (Passive)
c. The pretzels were eaten. (Truncated passive)
d. The pretzels, the mice ate. (Topicalization)
e. What ate the pretzels were the mice. (Wh-cleft)
f. What the mice ate were the pretzels. (Wh-cleft)
g. The mice are what ate the pretzels. (Reversed wh-cleft)
h. It was the mice that ate the pretzels. (It-cleft)
i. It was the pretzels that the mice ate. (It-cleft)
j. It was that the mice ate the pretzels. (Inferentials)
k. Not that the mice ate the pretzels. (*Not that* sentence)
l. The thing is that the mice ate the pretzels. (*Thing* sentence)

The order in which information is deployed in a sentence depends upon a number of factors, including whether it is already familiar to the audience, whether it is topical, and whether the speaker/writer wishes to give it special prominence. Each of the constructions illustrated just above has its own idiosyncratic textual effects, and so must be used in appropriate contexts. We will discuss a number of these in our chapter on Multi-Clause Sentences.

Exercise

1. Draw both the DS and SS trees of *The baby-sitter fed the children* and *The children were fed by the baby-sitter.*

2. Find five passive sentences in an authentic text. Replace them with their active counterparts, if possible. Then try to articulate why the author used the passive instead of the active in each case.

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GLOSSARY

ARGUMENT: any expression syntactically required by another expression, e.g., the direct object is an argument of a transitive verb.

ARGUMENT POSITION: a deep structure position to which a semantic role may be assigned by a verb, preposition, or other semantic role assignor. See **NON-ARGUMENT POSITION**.

COMPLEMENTIZER: an expression that introduces a subordinate clause, e.g., *that*; the non-argument, structural position (**COMP**) that such an expression occupies, viz immediately under S' (S-bar).

DEEP STRUCTURE: abstract level of syntactic/structural representation posited by transformational grammar and created by phrase structure rules, into which lexical insertion rules place lexical items, and which transformational

rules alter by moving, deleting, or inserting items.

DELETION: the removal of parts of a linguistic expression by transformation, especially when the deleted elements can be readily inferred from the context.

***DO* INSERTION/SUPPORT**: transformational rule that places a form of the auxiliary *do* into clauses that include no other auxiliary, to indicate emphasis or negation or to allow subject auxiliary inversion.

EXISTENTIAL *THERE*: use of the form *there* in simple *be* sentences with indefinite subjects that denote the existence of the subject's referent, e.g., *There is a house in New Oreleans.*

FACE: our expectation that others will respect our public self-image (positive face) and desire not to be imposed upon (negative face); concept in **POLITENESS** theory.

IMPERATIVE SUBJECT DELETION: transformational rule that deletes the deep structure subject of imperative clauses (typically argued to be *you*).

MOVEMENT: class of transformational rules designed to explain why expressions that are not in their deep structure position, are interpreted as if they were. See **SUBJECT AUXILIARY INVERSION**, **TOPICALIZATION**, **WH-MOVEMENT**.

NON-ARGUMENT POSITION: a structural position to which a semantic role may not be assigned directly by a verb, preposition, or other semantic role assignor, e.g., the COMP position.

PARTICLE: minor uninflected part of speech, including words such as *up*, *over*, which can also be used as adverbs and prepositions, and which combine with verbs to create **PHRASAL VERBS**.

PASSIVE VOICE: one of many marked English sentence constructions that allow the redistribution of information in clauses; contrasts with the active voice in that it includes a form of *be* associated with a past participle verb, its subject typically corresponds to an active object, and the object of its *by* phrase (if it has one) corresponds to the active subject.

PHRASAL VERB: idiomatic verbal unit composed of verb and particle, e.g., *look up*, *hook up*.

PHRASE STRUCTURE RULES (PSRS): rules posited by transformational grammar that create deep structure trees.

POLITENESS: theory designed to account for the use of expressions that orient to an interlocutor's **FACE**.

SEMANTIC ROLES: set of meaning relations between expressions in sentences, especially between verbs and noun phrases, e.g., Agent, Theme, etc.

SUBJECT AUXILIARY INVERSION (SAI): movement transformation that takes the first auxiliary verb in a clause and moves it to the left of the clause's subject; applies in interrogatives.

SURFACE STRUCTURE: level of syntactic/structural representation posited by transformational grammar and derived from deep structure by applying **TRANSFORMATIONAL** rules.

TOPICALIZATION: one of many marked English sentence constructions that allow the redistribution of information in clauses; places to the left of the subject a phrase that would normally occur elsewhere in a sentence.

TRANSFORMATION/TRANSFORMATIONAL RULE: device posited by transformational grammar that transforms deep structures into surface structures by moving, deleting, or inserting expressions.

TRUNCATION: the deletion of the agentive/*by*-phrase of a passive sentence.

WH-MOVEMENT: transformation that moves a wh-phrase into COMP.

WH-QUESTION: interrogative sentence form in which wh-movement has applied.

12 Multi-Clause Sentences

KEY CONCEPTS

Multi-clause sentences: complex, compound, compound-complex
Recursion
Complex sentences
Finite and non-finite clauses
Coordination: compound, compound-complex sentences
Miscellaneous information-restructuring sentence types

INTRODUCTION

The discussion in this chapter depends on a distinction between sentences and clauses. Clauses, as we noted, are grammatical units comprising one subject and one predicate, and consequently, one main verb. Sentences are grammatical units comprising one or more clauses. An understanding of the ways in which clauses combine to form sentences is valuable to teachers helping students develop more sophisticated writing skills. Multi-clause sentences allow the integration of several propositions into a single grammatical unit. One hallmark of good style is an appropriate sequencing of simple and complex sentences. The ability to compose appropriately complex sentences can be fostered by clause-combining exercises.

MULTI-CLAUSE SENTENCES

The clauses that constitute multi-clause sentences can be combined either by coordination, subordination, or both, called complex, compound, and compound-complex sentences, respectively. The most inclusive clause in each sentence is its **main clause** (in light italics in the examples just below), which must be marked as either present or past tense, that is, it must be finite. A **subordinate** clause is grammatically dependent on some element in another clause; it may function as a subject, complement, or modifier in the higher clause.

A **complex** sentence contains one or more subordinate clauses (bolded), e.g., *Hofstetter believes* ***that he is being targeted by Homeland Security agents***. In **compound** or **coordinated** sentences, two or more clauses are brought together as grammatical equals, connected by a coordinating conjunction (bolded) to one another e.g., *Many people can identify parts of speech* ***but*** *they cannot justify their identification*. Because no clause in a compound sentence is subordinate to another (by definition), all the clauses in a compound sentence are main clauses.

Compound-complex sentences are a combination of complex and com-

pound sentences. They may consist of coordinated clauses (bolded) that are subordinate to another clause, e.g., *Edgeworth believed* ***that novels should have redeeming social value and that her writing might help improve social conditions***; or one or more of the coordinate clauses may include one or more subordinate clauses (bolded), e.g., *Compound-complex sentences consist of at least two coordinate clauses and at least one of those must contain a clause* ***which is subordinate to it***.

To orient ourselves, let's recall that in our chapter on Major Parts of Speech we distinguished between intransitive verbs (i.e., those that are incompatible with a direct object, such as *cought, laugh*, *lie*), transitive verbs (i.e., those that require a direct object, such as *bite*, *consume*, *transmit*), bitransitive verbs (i.e., those that require a direct and an indirect object, such as *give*, *offer, send*,), linking verbs (i.e., those that "link" a subject with a subject complement, such as *be*, *become, seem*), and object complement verbs (i.e., those that require both a direct object and a complement associated with that object, such as *consider, elect, name*). We revisited this subcategorization of verbs in our chapter on Phrases, where we dealt with the distinct VPs associated with each type. In our chapter on Basic Clause Patterns we added NP subjects to those VPs to create clauses built around each of these verb types. We illustrated objects with NPs, and complements with NPs and APs. In this chapter we substitute clauses for the NPs that functioned in the chapter on Basic Clause Patterns as subjects, direct objects, indirect objects, and subject and object complements. We will begin with subordinate **finite clauses** (clauses that are marked for either present or past tense) and move on to **non-finite** clauses (those that are not marked for present or past tense). Then we will continue the discussion we began in Phrases and Minor Parts of Speech on modifying clauses, including **relative clauses** (which are modifiers in NPs), and **adverbial clauses** (which modify Vs, VPs, and clauses). We wrap up this chapter with a brief discussion of a few sentence types that are designed to allow for alternative ways of presenting information in sentences.

We begin with a brief overview of how one clause is included within another, technically known as **recursion.**

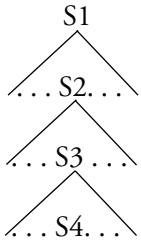
RECURSION

The possibility of creating multi-clause sentences depends on a characteristic of language called recursion. **Recursion** is the possibility of allowing a grammatical category to recur inside another instance of the same category, for example, an NP within an NP, or an S within an S, and so on.

(1) a. She said something. (One clause)
b. She said [that I don't know anything]. (Two clauses)
c. She said [that I don't know [what I want]]. (Three clauses)
d. She said [that I don't know [what I want [Bill to do]]. (Four clauses)
e. She said [that I don't know [what I want [Bill to do]] . . . (Indefinite number of clauses)

We can represent this schematically as:

(2)



Recursion is one of the most important characteristics of natural language because it is the basis of language's open-endedness, its creativity.

Because one clause can be included (**embedded**) in another, a given sentence may have any number of clauses. The main clause is the one that is not embedded in any other clause. In all the sentences of (1), *She said X* is the main clause. All other clauses are subordinate. However, it should be clear from (2) that not all subordinate clauses are directly subordinate to the main clause—they may be subordinate to *other subordinate clauses*. In (2), S1 is the main clause and all the others are subordinate to it. However, only S2 is directly subordinate to S1; S3 is directly subordinate to S2, and S4 is directly subordinate to S3.

COMPLEX SENTENCES

In this section we will illustrate the range of functions of subordinate clauses using only finite clauses, that is, clauses that are marked as either past or present tense or that contain a modal.

Clauses that function in the nominal range

The subordinate clause in a complex sentence may function as its subject, direct object, indirect object, object of a preposition, or as a complement.

Clauses that function as subjects
Subordinate clauses can appear as subjects of main clauses:

(3) a. *That students enjoy grammar* proves my point.
b. *That he fled* will convince the jury of his guilt.
c. *That this arrangement may not work out* is very upsetting.

We can apply our usual types of tests to show that these embedded clauses are subjects. We can replace them with ordinary NPs:

(4) a. *This fact* proves my point.
b. *His flight* will convince the jury of his guilt.
c. *That possibility* is very upsetting.

The pronouns that appear in this position must be in the nominative case:

(5) a. They prove my point.
b.*Them prove my point.

Notice that when the subject of a sentence is an embedded sentence, the verb of that sentence is singular; that is, sentential subjects such as those above are regarded as singular.

Exercise

1. Create five more sentences in which a clause functions as subject.

2. Apply the NP and pronoun tests described just above to demonstrate that the subordinate clauses really are subjects.

Clauses that function as direct objects
The italicized clauses in (6) are the direct objects of the higher verb:

(6) a. John claims *he has earned his first million already*.
b. We believe *he exaggerates a great deal.*

We can demonstrate that the embedded structures in (6) (typically called **complement clauses**) are the direct objects of the verbs like *claim* and *believe* by using a number of tests. The first test is that NPs substitute for them:

(7) a. John claims silly things.
b. We believe his exaggerations.

We can also substitute accusative pronouns for them:

(8) a. He claimed them.
b. We believed them.

The embedded clauses bear the same grammatical relationship to the verbs of their sentences as the NPs that replace them, and pronouns that replace them must be in the accusative case. These are clearly direct object NPs, so the clauses they replace must also be direct objects.

We now introduce a slight complication to the pattern above. Sentences (6a,b) can be paraphrased as (9a,b) respectively:

(9) a. John claims *that* he has earned his first million already.
b. We believe *that* he exaggerates a great deal.

These sentences include *that* at the beginning of the embedded clause. Words that introduce clauses in this way have various names. Traditionally, as we saw in our chapter on Minor Parts of Speech, *that* (and similar words) has been called a **subordinating** conjunction. Because it introduces complement clauses, many linguists refer to it as a **complementizer**. Because the complementizer occurs in the COMP position, as we described in our chapter on Modifications of Basic Clause Patterns, it must be part of the subordinate clause, as shown by the fact that whenever we move a clause (italicized), its complementizer (bolded) must move too. Compare (6a) and (6b) with (10a) and (10b), respectively;

(10) a. It is ***that*** *he has earned a million* that John claims.
b. It is ***that*** *he exaggerates* that we believe.

If we leave the complementizer in its old position (italicized), the result is ungrammatical.

(11) a. *It is he has earned a million that John claims *that*.
b. *It is he exaggerates that we believe *that*.

When we move elements, we move entire phrases, not just parts of them. Sentences (10) and (11) show that the complementizer is an integral part of

an embedded sentence.

As we hope you remember from our chapter on Minor Parts of Speech, the complementizer *that* must be distinguished from the demonstrative pronoun *that*. The two words just happen to be spelled identically, but within the system of English grammar they function rather differently. The demonstrative *that* contrasts with *this*, *these* and *those*, with which it forms a subsystem within the grammar. The complementizer *that* does not contrast with the demonstratives. There are no sentences of English in which an embedded clause is introduced by *this* or *those*:

(12) *We believe this/these/those he is a great grammarian.

The complementizer *that* is optional when the embedded clause is a direct object, though not when the embedded clause is the subject:

(13) a. That he is a great grammarian is not widely known.
b.*He is a great grammarian is not widely known.

Exercise

From newspapers collect 10 sentences containing finite subordinate clauses introduced by the complementizer *that* and 10 more without *that*. Is *that* truly optional or does its presence or absence convey some meaning? You might consult Biber et al (2002: pp. 321ff.)

Further support for our claim that these embedded clauses are direct objects comes from the fact that they can be passivized, as is typical of object NPs:

(14) a. That he has earned his first million already is claimed by John.
b. That he exaggerates is believed by many.

Exercise

1. Make up 5 new complex sentences with finite subordinate clauses as their direct objects.

2. Make a list of the tests for direct object clauses presented above. Using these tests, show that, in each of the sentences you constructed

in Exercise (1), each embedded clause is in fact the direct object.

Indirect question clauses, such as those italicized below, are another type of direct object clause. They are sentences in which the verb of the main clause names a questioning speech act, such as *ask*, *wonder*, and the like, and the subordinate clause is a wh- or if-clause with no subject-auxiliary inversion:

(15) a. I wonder *who the culprit is*. [wh-clause]
b. I asked him *whether he was ready to leave*. [*whether* clause]

These can be paraphrased as direct questions such as, *"Who is the culprit?" I wonder* and *"Are you ready to leave?" she asked*. Notice that subject-auxiliary inversion occurs in direct questions, but not in indirect questions.

Indirect questions must be distinguished from similar sentences with wh-clauses in direct object position such as:

(16) I know *what the thief took*.

These cannot be paraphrased as direct questions, but can be paraphrased by expanding the wh-phrase into a full NP:

(17) I know *which thing(s) the thief took*.

Exercise

Create another five sentences with finite indirect questions clauses in them. Show that your subordinate clauses really are indirect question clauses by rephrasing them as direct questions. Also, create or collect five direct questions and turn them into indirect questions. (Carter and McCarthy 2006 pp. 804-24 provide an excellent overview of the ways in which speech is represented in English discourses.)

Clauses that function as indirect objects

In (18) the italicized clause is the indirect object of *gave*:

(18) We gave *whoever was there* a French pastry.

We can demonstrate that this indirect question is the IO of this sentence

by applying the usual tests—Pro-Sub and passive:

(19) a. We gave *him* a French pastry.
b. *Whoever was there* was given a French pastry.

IO clauses are much more restricted than subject or direct object clauses. They seem to be restricted to clauses that refer to animate entities, which is not altogether surprising when we consider the typical semantic roles of the IO phrase, namely, Recipient or Beneficiary.

Exercise

1. Make up five new complex sentences with finite subordinate clauses as their IOs.

2. For each of the sentences you constructed in Exercise (1) show that the embedded clause is in fact an IO.

Clauses that function as objects of prepositions

Prepositions also may take sentential objects, most readily when they begin with *who*(*ever*) and similar words (20a-c). The following italicized clauses are the objects of the prepositions that precede them:

(20) a. We gave the pastry to *whoever would eat it.*
b. We left the crumbs for *whichever birds came by.*
c. We slept in *what we had worn all day.*

We know that the clause is the object of the preposition that precedes it because if we substitute a pronoun for the clause it must be in its object form:

(21) a. We gave the pastry to *her*.
b. We left the crumbs for *them*.

We can also isolate the entire prepositional phrase:

(22) a. It was *to whoever would eat them* that we gave the pastries.
b. It was *to her* that we gave the pastries.

Exercise

1. Make up five new sentences with finite subordinate clauses as objects of prepositions.

2. For each of the sentences you constructed in Exercise (1) show that your embedded clause is in fact the object of its preposition. Use the tests described in the discussion.

Clauses that function as complements

Subordinate clauses also function as subject or object complements and as complements within NPs.

Subject complements:

Linking verbs often allow their subject complements to be expressed as clauses:

(23) a. The proposal is *that we should teach language, not grammar*.
b. The problem is *that it is not my phone*.
c. The claim is *that analyses must be supported by arguments*.

Exercise

Create five more sentences containing finite subject complement clauses. Think of ways to demonstrate that the italicized clauses in (23a,b,c) really are subject complements.

Object complements:

Some verbs that take object complements allow those complements to be expressed as clauses:

(24) a. She dyes her hair *whatever color her car is*.
b. They elected her *whatever she wanted to be*.

Exercise

Create five more sentences containing finite object complement clauses. Think of ways to demonstrate that the italicized clauses in (24a,b) really are object complements.

Complements in NPs:
Certain classes of nouns take complements, which may be expressed as clauses:

(25) a. The idea *that the Earth is only a few thousand years old* has been utterly disproved.
b. The claim *that genetics determines character* is intriguing.

Note the overlap between nouns that take complement clauses and nouns that can occur as the head of the subject of a sentence with a subject complement clause, e.g., *idea*. In fact, a NP with a complement clause can typically be rephrased as a subject complement sentence with a clausal complement; compare the subject of (25a) with *The idea is that the Earth is only a few thousand years old*.

Exercise

Create five more sentences containing NPs that contain complement clauses, like those in (25a,b). For each, provide evidence that your noun complement clauses really are noun complement clauses.

Clauses that function as modifiers

We turn now to clauses that function as modifiers of various elements in sentences. We begin with relative clauses (RCs), which occur in NPs and modify their heads, for example, *We all know the person* ***whom/that you spoke to***. Later we will deal with clauses that modify Vs, VPs, and other clauses, namely adverbial clauses.

Clauses that modify nouns (relative clauses)
Relative clauses (RCs) (also, but misleadingly, called **adjective clauses**), follow the head nouns they modify and may begin either with *that*, a wh-word such as *who* or *which*, a phrase with a wh-word in it, or no special word at all. Relative clauses must be divided into two types, **restrictive** and **non-restrictive** (or **appositive**) relatives. In written English, appositive relatives are separated from their head noun by a comma and end with another comma. Restrictive relatives are not set off by commas. The presence or absence of commas reflects a semantic difference between these two types, although there are formal differences between them too, which we deal with below. We begin by illustrating some of the variety of restrictive relatives.

(26) a. The man ***that*** *we bought the boat from* skipped town.
b. The man ***who(m)*** *we bought the boat from* skipped town.
c. The man ***from whom*** *we bought the boat* skipped town.
d. The man ***whose boat*** *we bought* skipped town.
e. The man **0** *we bought the boat from* skipped town.

We want you to notice a number of features of these clauses. First, the finite RCs can be introduced by *that* (26a), a wh-word (26b), a phrase containing a wh-word (26c,d), or no introducer (**0**) at all (26e).

Second, each of the relative clauses has a "gap," a position, which if the clause were rephrased as a complete sentence, would have to be filled. In the sentences in (27), we indicate the gap as *e*. In (27a) the part of the NP that is modified by the RC, *the man*, is interpreted as the subject of the RC, so the gap is in the RC subject position. In (27b) the part of the NP modified by the RC, *the boat*, is interpreted as the direct object of the RC, so that the gap is in the RC DO position; in (27c, d) the part of the NP modified by the RC, *the man*, is interpreted as the object of a preposition in the RC, so the gap occurs after the preposition in each case. This claim is supported by the fact that the preposition is not followed immediately by its object, indicating that the gap is the OP position.

(27) a. The man that/who *e* sold us the boat skipped town. [Subject]
b. The boat that/which/**0** the man sold us *e* broke down. [Direct object]
c. The man that/who/**0** we sold the boat to *e* is very upset. [Object of preposition]
d. The man that/who/**0** we bought the boat from *e* skipped town. [Object of preposition]

Third, the wh-word is interpreted as **coreferential** with (i.e., referring to the same entity as) the head noun and any other modifiers of the NP that contains the RC. If we were to rephrase the relative clauses in (27) as independent sentences, we would replace the relative pronouns (where they occur) with the head noun and any modifiers, giving us:

(28) a. *The man* sold us the boat.
b. The man sold us *the boat*.
c. We sold the boat to *the man*.
d. We bought the boat from *the man*.

Fourth, if the RC contains a wh-phrase, then that phrase is coreferential with the gap in the RC. We indicate coreferentiality by identical subscripts:

(29) a. [The man]$_i$ whom$_i$ we bought the boat from e_i skipped town.
b. [The man]$_i$ [from whom$_i$]$_j$ we bought the boat e_j skipped town.

If there is no introducer, or if the introducer is *that*, then the head N and any modifiers is directly coreferential with the gap:

(30) [The man]$_i$ (that) we bought the boat from e_i skipped town.

Fifth, if the wh-word is the genitive *whose*, then the rest of the NP modified by *whose* must move to the COMP position along with *whose*.

(31) a. The man *whose boat* we bought skipped town.
b.*The man *whose* we bought *boat* skipped town.

Sixth, if the wh-word is governed by a preposition, then the preposition may or may not move to the front of the sentence with it, as in (32a,b).

(32) a. The man *from whom* we bought the boat skipped town.
b. The man *whom* we bought the boat *from* skipped town.

If the introducer of the relative is *that*, or if there is no introducer, then no movement of the preposition can take place, as the ungrammaticality of (33a,b) shows:

(33) a. *The man from that we bought the boat skipped town.
b. *The man from we bought the boat skipped town.

Some grammarians call both the wh-words and *that* relative pronouns. This appears to us to ignore differences between them such as the ones we just noted. We will therefore distinguish between wh-words, which are true pronouns, and *that*, which we have called a complementizer. *That*, as a complementizer, is morphologically invariant and appears only at the beginnings of subordinate clauses.

The restrictive relatives clauses that we have been examining are typically interpreted as providing information necessary for identifying the referent of the entire NP. Another kind of relative clause, the **non-restrictive**, supplies extra information that is not considered necessary to identify the refer-

ent of the NP:

(34) a. The claim, which is fully supported by the evidence, . . .
b. The claim which is fully supported by the evidence . . .

The non-restrictive relative, (34a), refers to some claim and then adds the supplementary information that the claim is fully supported by the evidence. The reader/hearer is assumed to know which claim is being referred to without this extra information. The restrictive relative, (34b), refers to a claim that is assumed to be identifiable only by using the information in the relative clause to distinguish the intended claim from other claims.

One syntactic effect of this difference between restrictive and non-restrictive relatives is that the head of a non-restrictive, but generally not of a restrictive, may be a proper noun:

(35) a. Bill, who is well known to all of us, will sing his favorite tune "Home on the Range."
b. *Bill who is well known to all of us will sing his favorite tune "Home on the Range."

One explanation for this is that the referents of proper nouns are assumed to be identifiable by hearers/readers without extra information. Restrictive relatives, whose information is assumed to be essential for the identification of the referent, are therefore redundant with proper nouns. Non-restrictive relatives modifying proper nouns, whose information is assumed to be supplementary, are not redundant. We do, however, find sentences such as the following, which might be used in a situation in which there are several individuals called Bill. In that case the usual assumption associated with proper names may be suspended and the specific Bill being referred to can be identified by a restrictive clause:

(36) The Bill who has the rose between his teeth . . .

We turn now to some formal differences between restrictive and non-restrictive relatives that we mentioned above. Restrictive relative clauses may be introduced by either a wh-word, *that*, or zero. Non-restrictive clauses may be introduced only by wh-words.

(37) a. Mr. Pferdfeld, whom we have just met, . . .
b.*Mr. Pferdfeld, that we have just met, . . .

c.*Mr. Pferdfeld, we have just met, . . .

Moreover, restrictive relative clauses may be moved away from the nouns they modify, but non-restrictives may not:

(38) a. A man *who was from Iceland* came in.
b. A man came in *who was from Iceland*.
(39) a. Bill, *who was from Iceland*, came in.
b.*Bill came in, *who was from Iceland*.

We should also mention here, that other modifiers in NPs can be restrictive or non-restrictive, such as PPs.

(40) a. Dell computers with touch-screen capability . . .
b. Dell computers, with touch-screen capability, . . .

So far we have described only full finite relative clauses. However, we also find **reduced relative clauses**:

(41) The man *standing near the entrance* is my father.

(41) can be interpreted as an elliptical version of (42):

(42) The man *who is standing near the entrance* is my father.

Reduction of this sort is common when the implied material is a wh-word and an inflected form of *be*, which as we saw before, is referred to as **whiz-deletion**.

Reduced relatives may also function as non-restrictive modifiers:

(43) a. Astrid, standing near the entrance, was almost trampled in the rush.
b. Astrid, who was standing near the entrance, . . .

Exercise

1. Using (a) as a model, for each sentence below: (1) identify the relative clause; (2) determine whether a wh-word, *that*, or zero introduces the clause; (3) identify the expression modified by the clause; (4) locate the gap in the clause; (5) "normalize" the clause by expressing it as an independent sentence as in (28); and (6) identify the grammatical

function of the gap in the clause.

a. [The one] (3) [(1) $_{RC}$ *that* (2) I choose *e* (4)] will be rewarded. I choose the one (5). Direct object (6).
b. The guy who brought the whoopie cushion will be disciplined.
c. The person you give it to will just throw it away.
d. Zelda bought the pink flamingo that Scott liked so much.
e. Wanda asked the man she considered the main suspect where he had been on the night of the robbery.
f. They laugh best who laugh last.

2. Using (a) as a model, combine the clauses in each of the following pairs of clauses so that one member of each pair becomes a full relative clause modifying a noun phrase in the other:

a. The avocados taste delicious. The avocados came from California. *The avocados that came from California taste delicious. The avocados that taste delicious came from California.*
b. I am writing a term paper. The term paper is taking me forever.
c. The computer is acting up. My wife bought me the computer.
d. The book is an excellent source of information. I got this idea from the book.
e. The appendix provides answers to the questions. The appendix is at the end of the book.

3. If any of the full relative clauses you created in (2) can be reduced (e.g., by whiz-deletion), then do so, e.g., *The cheese which is from Wisconsin . . ., The cheese from Wisconsin . . .*

4. Each of the following sentences contains a relative clauses. Using (a) as an example, separate each sentence into two clauses, analogous to the pairs of clauses in Exercise (2):

a. The clause that includes all the subordinate clauses in a sentence is the main clause. *The clause is a main clause; The clause includes all the subordinate clauses in a sentence.*
b. We discuss a few sentence types that allow the rearrangement of phrases.
c. An absolute construction is a construction that is grammatically set apart from the rest of the sentence.
d. The constructions that we have been examining are restrictive relatives.
e. The sentences whose properties we discussed are quite compli-

cated.

(Note: Clause-combining, as in exercise (2), and clause-decombining as in exercise (4), are valuable tools for teaching relative clauses. The technique can also be used with other multi-clause sentence types.)

5. The difference between written restrictive and non-restrictive relatives is indicated through punctuation. How is it indicated in speech?

6. In the following sentences identify each relative clause and indicate whether it can be restrictive or non-restrictive. (Punctuation has been omitted intentionally.) If a sentence can be either, discuss the difference of meaning. Punctuate each sentence according to your interpretations.

a. Everyone who viewed the exhibit was satisfied.
b. The visitors who viewed the exhibit were satisfied.
c. Wendy who comes from Wyoming knows a lot about ranching.
d. I hit the brakes which caused the car to fishtail.

Clauses that modify verbs (adverbial clauses)

Adverbial clauses are typically introduced by what have been traditionally called **subordinating adverbial conjunctions** (**SACs**) and generally fulfill the same functions as AdvPs, indicating such concepts as time, place, condition, cause, and purpose. They appear in the positions typical of AdvPs (initial, medial and final). Again we begin with finite adverbial clauses and return to non-finite ones later.

Time clauses

(44) a. *After you left the party*, things really began to swing.
b. *As soon as the mailman came*, Terry ran to the door.
c. *Before Bush was elected*, there was more money for schools.
d. *Since the shuttle crashed*, NASA has been demoralised.
e. *When she died*, she left her pets $1,000,000.

Place clauses

(45) a. *Wherever you find cotton*, you will also find the boll weevil.
b. Double quotes should be used *only where they are appropriate*.

Cause clauses

(46) a. *Because he hoped to elude his pursuers*, Fred continued his trek.
b. *Because/since/as funding is scarce*, research is hampered.

Purpose clauses

(47) a. We packed food for 6 meals *so (that) we could stay out overnight*.
b. *In order that we could do well*, we formed study groups.

Result clauses

(48) a. She was *so* stunned *that she could not speak*.
b. The shooting star moved *so* quickly *that I almost missed it*.

Conditional clauses

Conditionals are particularly important for ESL students, and are included in all ESL textbooks. The subordinate clause (typically introduced by *if* or *when*) describes a condition that must be met if the situation in the main clause is to occur. Discussions of conditionals usually divide them into two major types, the **hypothetical** and the **real**.

The subordinate clause of a hypothetical conditional represents a situation that either cannot or is unlikely to be met (49a), while real conditions can be met (49b):

(49) a. *If I were eight feet tall,* (then) my dunk shot would be better.
b. *If I practice more*, my swing will improve.

Reduced adverbial clauses

Like relative clauses, some adverbial clauses may also be reduced by deleting a form of *be* and a pronominal subject that is coreferential with an NP in the higher clause, but leaving its SAC. (50a) illustrates a full finite adverbial and (50b) its reduction.

(50) a. *While she was living in Africa*, Sheila learned Swahili.
b. *While living in Africa*, Sheila learned Swahili.

Exercise

1. Make a list of 10 common subordinating conjunctions, for example,

until, once, whenever. Create or find at least one sentence that contains a subordinate adverbial clause introduced by each of these conjunctions.

2. Provide example sentences to demonstrate that adverbial clauses can, like AdvPs, appear in initial, medial, and final positions. Is one or more of these positions more common or natural? Does the status of the clause as finite or non-finite affect its potential to occupy various positions?

3. For each sentence you created or found for Exercise (1), identify the subordinate adverbial clause from the remainder and express it as a separate clause.

4. Using ten different SACs, create ten pairs of clauses that can be combined so that one member of the pair becomes a subordinate adverbial clause (e.g., *When Pavlov rang his bell; Pavlov's dogs salivated* can be combined as *When Pavlov rang his bell, his dogs salivated* or *Pavlov's dogs salivated when he rang his bell*.

5. In an authentic text (i.e., a magazine, book, journal, etc.), find ten adverbial clauses. For each clause say whether it is a time, place, cause, result, or conditional clause. For any conditional clauses you find, say whether they are hypothetical or real.

FINITE VS. NON-FINITE CLAUSES

Consider now the formal differences between the italicized clauses in the following sentences:

(51) a. We think *the ghost appears at midnight*.
b. We want *the ghost to appear at midnight*.

We can see that both are clauses since each has a subject NP (*the ghost*) and a VP (*appear/s at midnight*). However, the italicized clause in (51a) is a finite clause: it is in the present tense, and its subject agrees with its verb. We could even include a modal in it:

(52) We think *the ghost will appear at midnight*.

In contrast, the non-finite clauses like those in (51b) do not allow for agreement or modals:

(53) a. *We want the ghost to *appear**s*** at midnight.
b. *We want the ghost ***will*** appear at midnight.
c. *Oscar's ***must*** reading of the play . . .
d. *The book ***must*** lying on the table . . .
e. *The bones ***must*** gnawed by the dogs . . .

By the term *finite*, then, we mean that a clause is marked with a present or past tense inflection or includes a modal auxiliary. An easy way to spot a finite clause is to look at its first verb; if it is in the present or past tense or if it is a modal, then the clause is finite. Otherwise it is non-finite. Additionally, if a subordinate clause is, or can be, introduced by *that*, then it is finite.

Exercise

For each of the highlighted clauses below, determine whether it is finite or non-finite.

a. Glen claims *that he is the world's greatest limerick poet*.
b. Malcolm intends *to return to school in the fall*.
c. *For us to win,* we must first qualify for the tournament.
d. *To err* is human; *to forgive* is divine.
e. *That the Earth is warming* is truly cause for alarm.

Non-finite clauses

Non-finite clauses are always subordinate. They fall into three categories—**gerunds**, **infinitives**, and **participles**.

Gerunds

Gerunds are almost complete clauses whose first verb is a Ving form and which always function as NPs, therefore as subjects, objects, or objects of prepositions:

(54) a. *Giving grammar lectures* is always a challenge. [Subject]
b. *Bill's leaving town* confirmed his guilt. [Subject]
c. We encourage *discussing language*. [Direct object]
d. We give *discussing language* our highest priority. [Indirect object]

e. We give our highest priority to *discussing language*. [Prepositional object]

Gerunds can generally be paraphrased as finite clauses. For example, *Bill's leaving town* can be paraphrased as (55a,b, or c), among others:

(55) a. Bill left town.
b. Bill will leave town.
c. Bill is leaving town.

The subject of the finite paraphrase (*Bill*) may show up as a genitive phrase (*Bill's*) in the gerund, although in many varieties of English (especially informal ones) it may be in the objective case:

(56) I don't like *his/him* being out late at night.

The direct object of the finite paraphrase of a gerund may show up as the object of the preposition *of* in the gerund:

(57) a. Oscar read the poem.
b. Oscar's reading *of* the poem.

Exercise

(a) Identify the entire gerund phrase in each of the following sentences, and (b) identify the grammatical role the gerund plays in the sentence in which it occurs.

a. Parting is such sweet sorrow.
b. We anticipated their losing in the final.
c. The teacher had no objection to my leaving class early.
d. Higgins gave riding his best try.
e. My most pleasurable activity is hiking in the mountains.
f. They taught him skiing.

Infinitives

We will divide infinitives into **bare infinitives** (58a) and ***to*-infinitives** (58b, c):

(58) a. I saw/heard/felt them *leave through the window*.

b. I want them *to leave through the window*.
c. *For them to leave through the window* would be insulting to our host.

The infinitives in (58a-c) are predicates and as such assign a semantic role to some NP. In these three examples, the infinitive predicates assign the role Agent to *them*. However, note that *them* is in the accusative rather than the nominative case and so seems also to be an object of the higher verbs in (58a, b) and of *for* in (58c).

In a bare infinitive, the verb appears in its uninflected form. This form of infinitival clause occurs after modals, with verbs of perception such as *see*, *hear*, and *feel*, and with other verbs such as *let*, *make*, and *do*.

(59) a. She may/might/should/will/would/can/could/must *leave*.
b. *Leave immediately* is what he should do.
c. I saw *John take it*.
d. I heard *Mehta conduct Beethoven's Ninth*.
e. I felt *it move under my hand*.
f. We let *him come in*.
g. We made *her leave*.
h. Do *come in*.

In a ***to*-infinitive**, the verb appears in its uninflected form after *to* (which is simply a marker of the infinitive, not a preposition):

(60) a. *To leave now* would cause a lot of trouble.
b. We want *to leave immediately*.
c. The goal is *to leave as soon as possible*.
d. We chose her *to be the next president*.
e. The horse *to back* is Ashkenazy Anchovy.
f. *To get there before dawn,* we must leave at 2 a.m.

The italicized parts are *to*-infinitival clauses.

To-infinitives function as subjects (60a), objects (60b), complements (60c-d), relative clauses (60e), and adverbials (60f).

Exercise

(a) Identify the entire infinitival phrase(s) in each of the following sentences; (b) for each infinitival you identify, say whether it is a bare

infinitive or a *to*-infinitive; and (c) identify the grammatical role the infinitival plays in the sentence in which it occurs.

a. To err is human; to forgive is divine.
b. Musselwhite intends to consider his options.
c. Musslewhite's intention to consider his options has his boss worried.
d. They felt the earth shake.
e. To be or not to be is the question.

What complexities did you discover? How did you deal with them?

Participles

We distinguish two types of participles—Ving (a.k.a. present) participles and Ven (a.k.a. past) participles. Both act as noun modifiers. The first verb of a present participle is a Ving verb:

(61) a. The book *lying on the table* is free to whoever wants it.
b. Anyone *hoping to get on the boat* must have a ticket.

The first verb of a past participle is in the Ven form:

(62) The bones *gnawed by the dogs* are scattered throughout the yard.

Many participles can be paraphrased as full tensed clauses:

(63) a. The book *which is lying on the table* . . .
b. Anyone *who is hoping to get on the boat* . . .
c. The bones *which were gnawed by the dogs* . . .

Participles may often be viewed as reductions of these full tensed clauses by whiz-deletion. However, when the verb of the participle is a state verb such as *resemble*, the present participle and a finite paraphrase are not so easily related:

(64) a. A mountain resembling an elephant . . .
b.*A mountain which is resembling an elephant . . .
c. A mountain which resembles an elephant . . .

The participles we've discussed have all occurred after the noun they modify, just as relative clauses do. However, participles may occur to the left of the subject of the sentence in which they function (we'll call them **preposed** participles):

(65) a. *Pressed by reporters*, the president acknowledged that the war was a fiasco.

In cases like (65a), the participle non-restrictively modifies the subject of the main clause (*the president*), as the paraphrases (65b and c) show:

(65) b. The president, *pressed by reporters*, acknowledged that the war was a fiasco.
c. The president, *who was pressed by reporters*, acknowledged that the war was a fiasco.

Alternatively, the participle phrase in (65a) can be paraphrased as a full or reduced adverbial clause:

(65) d. *When (he was) pressed by reporters*, the president acknowledged that the war was a fiasco.

Sometimes, speakers (and more problematically, writers) will produce preposed participles that cannot be associated with the subject of the sentence to which they are attached:

(66) Pressed by reporters, the war was acknowledged to be a fiasco.

When a preposed participle cannot easily be associated with an NP in the main clause, it may difficult to interpret. Such difficult-to-interpret participles are referred to in style manuals and composition textbooks as **dangling participles**, which writers are advised to avoid.

In certain cases, often called **absolute constructions** (italicized), a participle may contain a subject (bolded):

(67) a. ***All things*** *being equal*, we decided to take the train.
b. ***His soul*** *riven by guilt*, Aaron plunged from the precipice.

The term **absolute** suggests a construction set apart from the rest of the sentence. An absolute modifies the entire sentence that follows it, much as an adverbial clause does.

Exercise

(a) Identify the entire participial phrase in each of the following sen-

tences; (b) for each participle you identify, say whether it is a Ving (present) or a Ven (past) participle; and (c) identify the expression modified by the participle.

a. A miser parted from his money must surely be desperate.
b. The guy giving directions is as lost as everyone else.
c. His lead cut in half, Tiger redoubled his efforts.
d Rejected by the publisher, Ashley consigned his manuscript to the flames.
e. Having been issued a second yellow card, Renoldo had to sit out the next game.
f. All being fair in love and war, chess players routinely try to distract their opponents.
g. Remaining students must register at the department office.

Auxiliary verbs in non-finite constructions

Except for modals, non-finite VPs may have a range of auxiliary verbs. A few of the possibilities are indicated below. (Note that the *first* auxiliary *never* carries a tense inflection.)

(68) a. It is exhilarating *to* ***have jumped*** *with a bungee cord*. (Infinitive without subject)
b. It is wonderful *for Wanda to* ***be jumping*** *from a bungee cord*. (Infinitive with *for-to* + subject)
c. Egbert regrets ***having jumped*** *from a bungee cord*. (Gerund with out subject)
d. *Waldo's* ***being prevented*** *from bungee jumping* relieved Wanda. (Passive gerund with subject)
e. ***Having consulted*** *the reputable sources*, I then consulted my horoscope. (Present participle)
f. ***Having been advised***, I decided to face the bungee jump. (Present, pefect, passive participle)
g. *My guru* ***having been consulted***, I decided to face the bungee jump. (Absolute passive participle with subject)

One final matter pertaining to the forms of participial or reduced relative clauses: as these names suggest, the verb of the reduced relative clause is in participial form, either *-en* (past participial) or *-ing* (present participial) form, and elements of the clause are omitted. Consider:

(69) a. People sentenced to life in prison . . .
b. Anyone walking on the grass . . .

And compare them with:

(70) a. People who are/were sentenced to life in prison . . .
b. Anyone who is/was walking on the grass . . .

Clearly, the relative clauses in (69a/70a) are passives, and in (69a) the relative pronoun and the form of passive *be* are omitted. An analogous omission of *who is/was* occurs in (69b).

However, the terms past and present are misleading, as they suggest that participial clauses imply past or present time. The clauses are not in fact restricted to these interpretations:

(71) People sentenced to life in prison from now on will have to pay for their keep if the proposed new law goes into effect.
(72) Anyone walking on the grass at that time was subject to a stiff fine.

In (71) the past participial relative actually refers to a future time, *from now on*. In (72) the present participial relative refers to a past time, *at that time*. In short, the actual time reference of the reduced relatives is governed by elements other than their verbs.

COORDINATION

Compound sentences

Compound sentences are the result of combining clauses by coordinating them with one another. They are typically, though not necessarily, conjoined by the coordinating conjunctions *and*, *or*, or *but*.

(73) a. The king is in his counting house and the queen is in her parlor.
b. The police must charge you or they must release you.
c. You must remain here but your partner may go.
d. The TV is on; the beers are chilled; the teams are on the field; we're ready for action.

Compound-complex sentences

The sentences of (73) illustrate coordination of main clauses. However, subordinate clauses, both finite and non-finite, may also be coordinated:

(74) a. We left *because we were tired* and *because the lecture was boring*. (Conjoined finite adverbial clauses)
b. Alex wanted *to sing* and *to play the piano*. (Conjoined *to*-infinitive complement clauses)
c. Anyone *who attends classes* and *who pays attention* should pass the course. (Conjoined relative clauses)
d. *Climbing Denali* and *winning the biathlon* were Meg's greatest accomplishments. (Conjoined gerunds functioning as subject)

Sentences like those in (74), which include coordinated subordinate clauses, are compound-complex sentences, as are sentences with coordinated main clauses, one or both of which contain at least one subordinate clause:

(75) The king, *who doesn't like to be disturbed*, is in his counting house, and the queen, *who is much more sociable*, is in her parlor, *where she is surrounded by her sycophants*.

In (75) the coordinated main clauses are *The king is in his counting house* and *The queen is in her parlor*.

MISCELLANEOUS INFORMATION-RESTRUCTURING SENTENCE TYPES

In this section we describe sentence types with subordinate clauses that do not fit neatly in the categories above: **extraposition**, **NP-movement** (or **raising**), **tough-movement**, **cleft,** and **pseudo-cleft** constructions.

Extraposition

Clauses that are interpreted as subjects may occur not only in the main clause subject position but also at the right hand end of the main clause predicate. Compare the following pair:

(76) a. *That Oscar writes poetry* upsets his parents.
b. It upsets his parents *that Oscar writes poetry*.

These two have essentially the same meanings. In both, the italicized clause

is interpreted as what upsets Oscar's parents, though in (76a) the clause appears as the subject of the main clause, whereas in (76b) that position is occupied by **expletive** (a.k.a. **empty**, **dummy**) ***it*** and the clause occurs at the end of the predicate. The rule that connects these two constructions is called **extraposition**, a name which suggest that the subject clause has been moved (-posed) outside (extra-) its normal position.

We have already exemplified another construction in which a clause is extraposed, but repeat our example here for convenience:

(77) a. A man who was from Iceland came in.
b. A man came in who was from Iceland.

Again, both sentences have identical meanings even though in (77b) the relative clause modifying *man* appears at the end of the predicate. The rule that links these two sentence types is called **extraposition from NP**.

One reason why English (and many other languages) allows extraposition and extraposition from NP is that clauses tend to be relatively long and so if they are not moved, they may disrupt the subject-predicate structure of the sentences in which they are subordinate. Sentences are generally somewhat easier to process (understand) when the clause has been extraposed. Another reason might be that while NPs require case marking, subordinate clauses do not, and so may be moved to positions that do not receive case.

Exercise

1. Apply extraposition to the following sentences:
   a. That dictionaries have poetic qualities has often been proposed.
   b. That we should carefully study Diamond's theories on the collapse of civilizations is abundantly clear.
   c. That grammatical subjects are not always topics has been repeatedly shown.

2. Reverse the extraposition in the following sentences:
   a. It must be recalled that the earliest inhabitants of the Americas arrived from Siberia.
   b. It is extremely likely that the researchers' claims are true.
   c. It is utterly inconceivable that the press secretary would tell such an egregious lie.

NP movement (raising) clauses

Consider now the following two sentences with almost identical meanings:

(78) a. It seems that Oscar has upset his parents.
b. Oscar seems to have upset his parents.

In both *Oscar* is interpreted as the subject of *has/have upset his parents*. However, in (78a) it occurs as the subject of the subordinate clause, whereas in (78b) it occurs as the subject of the higher verb *seem*. Note that the clause in (78a) is finite, whereas the clause in (78b) is non-finite. In fact, *Oscar* cannot occur as the subject of an infinitival clause after *seem*, *appear*, or *turn out*:

(79) *It seems Oscar to have upset his parents.

In general, these verbs require that the phrase understood as the subject of their infinitival complements be moved ("raised") to become the subject of the higher verb.

Tough *movement*

A similar (though by no means identical) movement may occur in sentences with adjectives such as *easy* or *hard* and NPs such as *a pain* or *a treat* (and many other expressions with similar meanings). These are often cutely called "*Tough* movement" sentences. *Tough* movement relates:

(80) a. It is tough to live with Hilda.
b. Hilda is tough to live with *e*.

Note that (80b) ends with a preposition whose object, *Hilda*, is missing (indicated by *e*), or more accurately, displaced: it appears as the subject of the main clause. Note too that the main clause subject of (80a) is the expletive *it*. This *it* does not refer to anything and occupies a position that receives no semantic role (which is why it is an expletive or dummy). *Hilda*, on the other hand, receives its thematic role from the subordinate verb and preposition. It is as if *Hilda* had been moved from the position marked *e* in the subordinate clause into the higher subject around the adjective *tough*, hence the name *Tough* movement. As another example, compare *It is distressing to have to deal with wasps* and *Wasps are distressing to have to deal with*.

A very reasonable question to ask at this point would be: why does English maintain pairs of sentences such as (78a, b) and (80a, b) whose members have identical meanings? While we do not have a definitive answer, we

believe that the reason has to do with the discourse functions of subjects. Typically, though by no means always, subjects function as the topics of their sentences. Topics refer to the entities that the sentences are about. So (78b) is about Oscar in a way that (78a) is not; similarly, (80b) is about Hilda, whereas (80a) is not. We would use the (b) sentences of these pairs in discourse contexts slightly different from the contexts in which we would use the (a) versions.

We turn now to a pair of sentence types that have characteristics akin to finite relative clauses, the **it-cleft** and **pseudo-cleft** constructions.

It-clefting

The following is an *it*-cleft sentence, and we will refer to the phrase in square brackets as its **focus** and to the italicized clause simply as its **clause**:

(81) It was [Henry Ford] *who invented the assembly line*.

Clefts consist of an expletive *it* higher subject, a form of *be*, a focus phrase (which may be any phrase type except VP), and a clause that looks like (but actually isn't) a finite relative clause.

The clause is like a relative in that it may be introduced by a wh-word, *that*, or (in some cases) nothing at all:

(82) It was Henry Ford (*who*/*that*/zero) invented the assembly line.

It also contains a "gap," which is interpreted as if it were "filled" by the focus phrase, so that the clefts above mean in essence:

(83) Henry Ford invented the assembly line.

The fact that a cleft can be reduced in this way has led some grammarians to suggest that the focus was actually moved out of the clause into its position in the higher clause.

Cleft foci are often interpreted as contrasting with some other phrase. For example, you might use a cleft such as the ones above if you thought that the audience believed that Roger Smith invented the assembly line:

(84) It was Henry Ford, not Roger Smith, who invented the assembly line.

If the focus is a PP, then the sense of contrast may fade somewhat:

(85) It was in 1789 that the French Revolution broke out.

The construction here suggests something like *specifically in 1789*, but could also be used if a hearer believed that the French Revolution broke out in 1689 or 1799.

The clause of a cleft sentence is usually interpreted as known information, known either to the hearer or by people generally. It is not, however, assumed to be currently in the hearer's consciousness (Prince 1978).

Exercise

For each of the following *it*-cleft sentences, create a brief text into which it fits naturally.

a. It is Obama who leads the delegate count.
b. It is the few, the powerful, and the famous who shape our collective destiny.
c. It is this level of production excellence that rescues Spielberg's movie from being merely a thriller.
d. It is urban life that is associated with excitement, freedom, and diverse daily life.

Pseudo-clefting (wh-clefting)

Like *it*-clefts, pseudo-clefts "cleave" a sentence around a form of *be*:

(86) *What irritates me* is [the amount of sports on TV].

Again, we will refer to the italicized expression as the pseudo-cleft clause and to the bracketed phrase as its focus, which are linked by a form of *be*. The clause may begin only with the wh-word *what*:

(87) a. *Who plays golf is Fred.
b. *Which ate the mouse was the cat.
c. *When I arrived was lunchtime.

And again, the basic meaning may be represented by a simpler sentence in which the focus phrase replaces *what*:

(88) The amount of sports on TV irritates me.

But just as clefts do not mean exactly what their non-cleft counterparts mean, neither do pseudo-clefts and their non-cleft counterparts. The clause of a pseudo-cleft represents information that the speaker assumes to be in the consciousness of the hearer at the time the sentence is uttered (Prince 1978).

Exercise

1. For each of the following pseudo-clefts, create a brief text into which it fits naturally.

a. What sets the US apart from all other countries is its venerable constitution.
b. What makes blogging special is that it allows individuals to rapidly express and disseminate their thoughts.
c. What must be remembered is that the effects of one's actions are never fully calculable.
d. What intrigues me is that morals are also subject to fashion.
e. What we must learn first is not that terrorists are uniquely evil but that all targeting of civilians is immoral.

2. In the following text, slightly adapted from Martha Grimes' novel *The Stargazy* (1998: 3), find at least one of each of the following: (a) a complex sentence; (b) a compound-complex sentence; (c) a relative clause; (d) an *it*-cleft sentence; (e) a pseudo-cleft sentence; (f) an extraposed sentence; (g) an NP movement sentence; (h) a *to*-infinitive clause; (i) an adverbial clause; (j) a Ving (present) participle; (k) a Ven (past) participle; and (l) a gerund. Be sure to identify the entire expression in each case.

> That was how she felt now. She would have preferred the isolation not be a freezing one, but personal discomfort bothered her only insofar as it kept her from performing. She had trained herself to withstand any discomfort that could come along, discomforts of either body or mind. The mind was more difficult, being limitless. She raised her eyes for a moment to look up at the stars. In the course of her studies, she had read that what fueled the stars was the merging of atoms. Fusion science. What fascinated her was the notion that the amount of energy in was the amount of energy out. There was an equation: *Q=1.* And this, she had to imagine, was perfect balance, like that of the Alexander Column. It was perfect balance that she was after; it was all that she was after. She wanted to get to that point

where nothing resonated, where the past could not pretend to shape itself into the present, where planes had clear sharp edges to which nothing clung. People didn't come into it; they weren't part of the equation. What relationships she'd had had been brief and in her control, though her partners didn't seem aware of this. It was astonishing that people could be so easily hoodwinked, so easily led.

CONCLUDING REMARKS

In this chapter, we explored the major grammatical structures that enable English speakers to create sentences of infinite length and complexity. Despite the intricacy and variety they make possible, finite and non-finite subordinate clauses are individually fairly simple. Each has a rather limited set of formal properties, and we have had to add very few functions to describe their workings. But the process of embedding—of building structures within structures—multiplies the potential for variety exponentially. We have only scratched the surface of that potential. If you want to see some dramatic demonstrations, pick up a sonnet by Shakespeare, a poem by Dylan Thomas, or a piece of prose by Henry James, William Faulkner, or Virginia Woolf. Or pick up an essay that you yourself have written recently. You will probably amaze yourself with the complexity of your own language.

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GLOSSARY

ABSOLUTE CONSTRUCTION: subordinate expression with no explicit grammatical link to the clause it depends on.

ADJECTIVE CLAUSE: common misnomer for **RELATIVE CLAUSE**.

ADVERBIAL CLAUSE: clause that functions in the range of adverbials, viz. modifies verbs, verb phrases, and sentences.

APPOSITIVE: expression that adds non-restrictive information. See **NON-RESTRICTIVE RELATIVE CLAUSE**.

CLAUSE: grammatical unit comprising a subject and a predicate.

COMPLEX SENTENCE: sentence containing one or more **SUBORDINATE CLAUSES**.

COMPOUND SENTENCE: sentence consisting of two or more coordinate clauses. Also called a **COORDINATE SENTENCE**.

COMPOUND-COMPLEX SENTENCE: sentence that includes both coordinate and subordinate clauses.

DANGLING PARTICIPLE: **PARTICIPLE** occurring to the left of a main clause whose implied subject cannot be interpreted as coreferential with the main clause subject.

EMBEDDING: incorporation of one clause within another, as subject, object, complement or modifier, or more generally, the inclusion of one expression within another. See **RECURSION**.

EXPLETIVE *IT*: occurrences of *it* that are non-referential, e.g., in the subjects of sentences to which **EXTRAPOSITION** has applied.

EXTRAPOSITION: movement of a clausal subject to the end of its sentence and insertion of **EXPLETIVE *IT*** in the subject position.

EXTRAPOSITION FROM NP: movement of a relative clause out of its NP to the end of its sentence.

FINITE CLAUSE: clause marked for present or past tense. See **NON-FINITE CLAUSE**.

GERUND: noun phrase derived from a verb phrase or from a clause, whose first verb is Ving.

INDIRECT QUESTION: clause subordinate to a verb such as *ask*, *wonder*, in a sentence that can be rephrased as a direct question.

INFINITIVE: **NON-FINITE CLAUSE** (1) whose first verb is in its base (uninflected) form (bare infinitive), or (2) whose first verb is marked by the particle *to* (*to*-infinitive).

IT*-CLEFT SENTENCE**: complex sentence beginning with **EXPLETIVE *IT, followed by a form of *be*, then by a focused phrase, which is followed by a finite clause containing a gap of the same grammatical type as the focus phrase, in a position from which the focus phrase was ostensibly moved. Used to structurally highlight the focus phrase, often for purposes of contrast. See **PSEUDO-CLEFT SENTENCE**.

MAIN CLAUSE: clause to which any other clauses in a sentence are subordinate.

NON-FINITE CLAUSE: clause that is not marked for present or past tense (see **FINITE CLAUSE**); including **GERUNDS**, **INFINITIVES**, and **PARTICIPLES**.

NON-RESTRICTIVE RELATIVE CLAUSE: RELATIVE CLAUSE whose information is not necessary to the identification of the referent of the NP of which it is a part. See **RESTRICTIVE RELATIVE CLAUSE.**

NP MOVEMENT: (apparent) movement of an NP from the subject of a subordinate clause into the subject position of verbs such as *appear* and *seem*. Also called **RAISING.**

PARTICIPLE: type of **NON-FINITE CLAUSE.** See **PAST PARTICIPLE, PRESENT PARTICIPLE.**

PAST PARTICIPLE: type of **NON-FINITE CLAUSE** whose first verb is in its Ven (past participle) form and which functions as a modifier, typically in an NP.

PRESENT PARTICIPLE: type of **NON-FINITE CLAUSE** whose first verb is in its Ving (present participle) form and which functions as a modifier, typically in an NP.

PSEUDO-CLEFT SENTENCE: complex sentence whose subject consists of a wh-clause and whose main verb is a form of *be*, whose complement is a focused phrase that is coreferential with the wh-phrase in the subject clause. Used to structurally highlight the focus phrase, often for purposes of contrast. See ***IT*-CLEFT SENTENCE.**

RAISING: See **NP MOVEMENT.**

RECURSION: property of natural language that allows expressions to include expressions of the same type, e.g., clauses within clauses, thus creating the potential for infinitely long and infinitely many expressions. See **EMBEDDING.**

REDUCED RELATIVE CLAUSE: RELATIVE CLAUSE whose complementizer or wh-phrase, subject, and copula have been deleted.

RELATIVE CLAUSE: clausal modifier in an NP. See **NON-RESTRICTIVE RELATIVE CLAUSE, RESTRICTIVE RELATIVE CLAUSE.**

RESTRICTIVE RELATIVE CLAUSE: RELATIVE CLAUSE whose information is necessary for the identification of the referent of the NP of which it is a part. See **NON-RESTRICTIVE RELATIVE CLAUSE.**

SENTENCE: grammatical unit consisting of one or more **CLAUSES.**

SUBORDINATE CLAUSE: CLAUSE that is grammatically dependent on an element of another clause.

***TOUGH* MOVEMENT:** (apparent) movement of an NP from a *to*-infinitival complement clause to the subject of a predicate such as *tough*, *easy*, *hard*, *a pain*, or *a treat*.

WH-CLEFT SENTENCE: See **PSEUDO-CLEFT SENTENCE.**

***WHIZ*-DELETION:** deletion of wh-phrase or complementizer, subject, and copula from a modifying clause.

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