Relevant
Linguistics
2nd edition, revised and expanded

*An Introduction to the
Structure and Use of English
for Teachers*

Paul W. Justice

Contents

Preface to the Second Edition

The second edition of this text is driven by the same ideas as the first—namely, the population of students taking linguistics courses for teachers requires a unique approach, and the materials used in such courses must reflect the goals and attitudes of their students while still remaining true to the values of the discipline. This approach is outlined in the following two sections written for students and instructors, respectively. However, while the approach has remained the same, the implementation of that approach has changed somewhat in this edition. These changes were motivated by some very useful feedback from students and other instructors who used the text. They include:

- Correction of typographical errors
- Correction of content errors
- Clarification of unclear explanations
- Elaboration of brief explanations
- Addition of new exercises
- Addition of appendixes with deeper looks at topics covered briefly in the text
- Addition of appendixes with coverage of areas not addressed at all in the text
- Addition of analysis questions that go beyond the basic discussions in the text

It's my hope that these changes will address the inadequacies of the first edition.

To the Student

As more and more institutions of higher learning realize the importance of linguistics in teacher preparation programs, linguistics courses are becoming a more integral part of their curriculum. You're reading this book because you're in a linguistics class, and you're probably in a linguistics class because your school or state feels that an understanding of language will help you be a better teacher. Unfortunately, you probably haven't taken a linguistics class before, so you probably have no idea what linguistics is all about or how it will help you be a better teacher. Hopefully, by the end of the term, this will change.

For many first time students of linguistics, the subject is inaccessible, boring, and seemingly irrelevant. The purpose of this textbook is to make linguistics more accessible, more interesting and more obviously relevant to you. It has been written with teachers and future teachers in mind. While it's not a teaching handbook, it does highlight areas of linguistics that are most relevant to teachers, occasionally even making specific suggestions for applications of the material to classroom teaching. In most cases, however, the specific applications will be up to you, the creative teacher, to identify.

For those neither in, nor pursuing, a career in education, this book will hopefully provide an accessible introduction to linguistic study, which will give you valuable insight into human language and prepare you for future study in the field.

To the Instructor

This textbook is based on many semesters of tried and true methods and materials. Every semester at San Diego State University there are seven or more sections of an introductory class that is populated largely by current and future elementary and secondary school teachers. Our goal is to teach them about the structure and use of language, with an emphasis on English, the language of instruction in most of their classrooms. The various instructors of this class have tried many different textbooks and have received repeated complaints from students about all of them. Some students say the books are incomprehensible; others say they are filled with an excessive amount of jargon, and others still don't see the connection between the material in the book and their chosen profession. The aim of this book is to eliminate, or at least reduce, these complaints by making linguistics more accessible and relevant. This text does not claim to be better than those currently in use; it merely claims to be more appropriate (and effective) for a particular group of students.

The approach this book takes is, of course, very descriptive in nature. The goal is to impress upon students the systematic nature of language and the scientific nature of linguistic inquiry. The text is data driven, with copious examples provided throughout. The idea is to lead students through descriptive analyses and help them really "see" the concepts as well as to provide them with reference materials that they can refer to when studying for tests or, better yet, preparing their own lessons or deciding how to address a classroom situation.

The data and examples used are mostly from English. When foreign language data is used, it is for the purpose of illustrating the differences between English and other languages. The purpose of these comparisons is to make students aware that there is nothing inherently "normal" about the way English works and that students from non-English speaking backgrounds have difficulty with English for very understandable reasons—the same reasons native English speakers have difficulty with other languages. Also, this focus on English tends to make the material seem more relevant to the students and, therefore, captures their attention better.

One issue to keep in mind when using this textbook is what can be referred to as the struggle between completeness and simplicity. That is, as teachers, we want to present our students with complete information about the structure and use of language, but at the same time, because language is so amazingly complex, we are sometimes forced to simplify it to make it more comprehensible to our students. At times, this text does this. Also at times, the sharper students catch the oversimplifications. Rather than apologize for it, an instructor can explain to them why the material has been simplified and invite them to continue searching for more "complete" answers to their questions, in some cases, by consulting more in-depth presentations in the appendixes.

Many of these oversimplifications appear in Chapter 6, the syntax chapter. Students tend to get overwhelmed by the sheer volume of material in a study of syntax, the result being that difficult choices must be made regarding how detailed the approach should be. Because of this, the approach to syntax in this chapter is greatly simplified in places. For example, in the presentation of phrase structure, certain kinds of words are not included at all. A quick glance at the data reveals that adverbs, while covered at the beginning of the chapter, do not make an appearance in the phrase structure sections. Also in this section, the approach to constituents is simplified. For example, noun phrases are represented with the simplified structure det+adj+N, rather than a structure that indicates grouping at different hierarchical levels. This is one of several simplifications that have been made with regard to phrase structure. Another feature that has been simplified is the treatment of "that" as a conjunction or relative pronoun. While this word is generally regarded as a complementizer, not a relative pronoun or conjunc-

tion, among linguists, such a presentation does not work well with the student population this book is written for. The philosophy behind this text is to teach as much about the structure and use of English as possible without going so far or being so technical that students tune out.

On a related note, while this text walks students through the basics of linguistic analysis in a very thorough way, you will find that it does not always delve as deeply as possible into some issues. That is, many of the gray areas of linguistics are not dealt with. For example, in the chapter on morphology, compounding is dealt with in a brief paragraph, while the topic could easily be discussed over several pages. The intended audience of this book often complains that detailed discussions serve only to confuse them and erect barriers between them and the material. This book *does* cover these gray areas, to a certain extent, because they are an essential part of the discipline, but not completely because some of the details are probably better dealt with in class. In fact, one of the main benefits of this book is, hopefully, that it will free up class time to discuss these complex issues by covering the basics in the text in a comprehensible way, thus allowing instructors to start somewhere other than the very beginning.

While the chapters do, as stated, often simplify aspects of language and avoid trouble spots, the appendixes, new to the second edition, help compensate. Each chapter has an appendix that builds on the content presented in the chapter. One of the goals of these appendixes is to present a different, more advanced approach to the same material covered in the chapters. The appendixes also include discussions of areas that are not specifically addressed in the chapters, such as semantics and the history of English. Instructors who want to introduce their students to these additional approaches and areas can use the appendixes to achieve this goal, but instructors who prefer not to do so, can simply skip them and use only the material in the chapters. A final appendix addresses the aforementioned gray areas by presenting analysis questions that force students to grapple with difficult issues, the goal being to test their analytical skills as they explore the gray areas.

Also, while the chapters are presented in a particular order, from the smallest units of language to larger ones, there is a certain amount of flexibility in terms of the order in which the chapters can be used. For example, the chapter on morphology could be covered before the chapters on phonetics and phonology. Another possibility that has been effective in the past is to handle phonology and morphophonology together, after both the phonetics and morphology chapters. However, though there is some flexibility, given the way the information on word classes is split between the morphology and syntax chapters, it's probably best to cover syntax later, as the syntax chapter assumes knowledge of the material covered in the morphology chapter. Also, the final chapter on language variation assumes knowledge of all of the material presented earlier. It serves to introduce important new concepts while reviewing familiar ones. Thus, it is most effective when covered at the end of the term.

Finally, understanding the pedagogical plan behind the book can help instructors decide how best to work with it. The philosophy behind this curriculum is that students learn best in class when they have a foundation of knowledge and skills to work with. Thus, it's recommended that students be assigned readings to be completed *before* the class session that will cover that particular area. Also important for establishing this foundation is completion of the quick exercises and data analyses in the text of each chapter. These can be used to lead into class discussions and involve students in those discussions. The other two components of the pedagogical philosophy are a thorough exploration of each area during class and independent practice through the completion of the end of chapter exercises *after* class. No solutions to

these exercises are provided in the book, so instructors who want to use them as graded exercises can do so. For those instructors who do not want to use them as graded exercises, solutions are available via the Web and can be distributed to students. Only instructors who adopt the text will have access to these solutions. To obtain access, please contact the publisher by email at pubs@csli.stanford.edu or by FAX at 650-725-2166. Please provide proof of text adoption on university letterhead.

The graphic below illustrates the pedagogical philosophy.

<u>Step 1</u>		<u>Step 2</u>		<u>Step 3</u>
Students read text and complete in-text exercises and analyses independently	⇒	Class discussion adds to depth of understanding	⇒	Students complete end of chapter exercises independently to solidify understanding
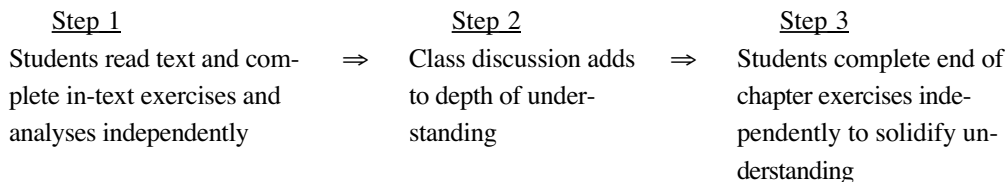
Acknowledgments

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Finally, I'd like to thank all the students over the years in my Linguistics 420 classes at San Diego State University, especially those early on, who had to endure horribly organized versions of my materials. Their comments and suggestions have been of tremendous use.

Any errors and limitations that managed to survive this barrage of constructive feedback are mine.

Paul Justice
San Diego State University
June, 2004

1

What is Linguistics?

In this chapter, we'll examine the discipline of linguistics to prepare you for the term. In addition to defining what linguistics *is*, we'll examine what it is *not*. In the process of doing this, we'll identify some of the more common, and important, misconceptions about linguistics.

Some specific goals of this text are the following:
- To encourage you to reevaluate your own beliefs and attitudes about language.
- To make you aware of the complexity of language and able to articulate this awareness.
- To make you aware of some of the similarities and difference among languages.
- To expose you to the "core" sub-fields of linguistics (phonetics, phonology, morphology and syntax).
- To introduce you to linguistic analysis, and to encourage you to think scientifically about language
- To provide you with some tools that you can apply in a subsequent study of linguistics or in professional settings.

Some important fundamental concepts of linguistics are stated below (adapted from Department of Linguistics, pp. 2–3):
- Every language is amazingly complex.
- Despite this complexity, all languages are highly systematic, though their systematicity is not transparent to native speakers of those languages.
- It is not easy for speakers of a language to think about or talk about their language use; although our speech is completely rule governed, we are not *consciously* aware of these rules.
- Speech is the primary mode of language; writing is only a secondary one. For proof of this, just think about the age at which you started speaking and the age at which you started reading and writing.
- Although most children learn their first language fluently by the age of five, they're not explicitly taught it; instead, they naturally acquire the rules of their language from the language use they hear around them.
- Linguists are interested in describing the similarities and differences among languages; this is especially important when trying to teach someone a second language.

1.1 What Do Linguists Do?

When people meet a teacher of linguistics, the first question they generally ask is "how many languages do you speak?" This question perfectly illustrates the fact that most people have very little idea what linguistics is all about. It also illustrates one of the most pervasive misconceptions about the discipline:

Misconception #1: Linguistics is the study of specific languages with the goal of learning to read, write or speak them.

If this were true, every linguist would speak a variety of languages fluently; otherwise, they'd be pretty poor linguists. Imagine the surprise, however, when people meet a linguist who speaks only a single language. This does *not* mean, however, that such individuals are professionally deficient. While these linguists don't speak any languages other than English, they know a fair amount *about* many other languages. Put another way, they don't know these languages (i.e., speak them), but they do know *about* them. This is an important distinction to make. It also leads us to a working definition of linguistics:

Clarification #1: Linguistics is the scientific study of the phenomenon of human language.

There are some important, yet seemingly subtle, points wrapped up in this definition. First, note the form of the word "language." If it were to read "languages," then the misinformed souls referred to earlier would be correct, but this is not the case. Rather than studying specific languages, linguists study the "phenomenon" of language, in terms of its structure and use. We use this word "phenomenon" in our definition not to make it unnecessarily wordy, but to clarify and reaffirm the notion of the larger issue of human language, rather than specific individual languages, as the primary focus of linguistics. You can think of human language as one big system, with each individual language being a specific part of the overall system. This concept is illustrated in Figure 1.1.
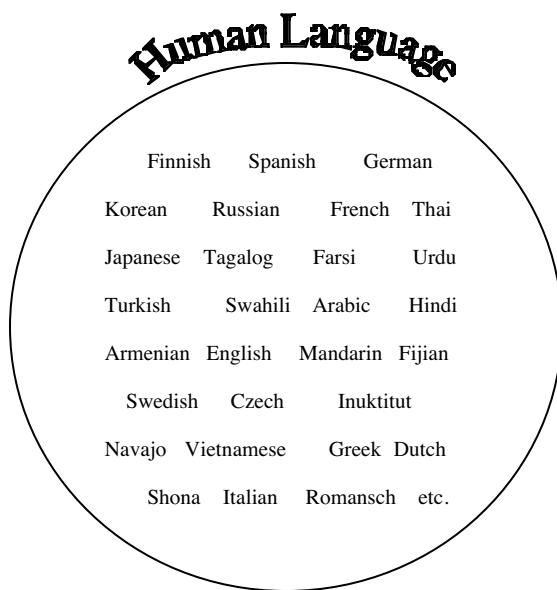
Figure 1.1: Human Language

Also important is the use of the word "scientific" in the definition. Throughout our exploration of the phenomenon of language, we will employ a scientific approach, similar to the "scientific method" you learned in grade school. That is, we will *observe* real language, we will make *hypotheses* about it, and then we will *test* our hypotheses to see if they're accurate. In the end we will describe "laws" of language in much the same way a physicist describes laws of nature. We'll explore the nature of language "laws" (i.e. rules) in more detail shortly.

A final note to make here is the *mode* of language that we will be dealing with primarily. At all times, unless otherwise specified, when we discuss language, it will be *spoken* language that we are referring to. This is because spoken language is the primary mode of language. The *written* mode will also be covered at times, but when this is the case, a special note will be made.

1.2   What is the Nature of Language?

Now that we've defined linguistics as the scientific study of language, we need to spend some time discussing what language is. This is not as simple as one might think. Most people, when asked to define language, focus on the concept of communication. They come up with definitions for language such as "a way to communicate thoughts and ideas." It's true that language is a tool for communication, but to offer such a simple definition would be misleading. The fact of the matter is that language is far more complex than most people realize. Consider the following example:

(1)   Jimmy says to Joey: "Hey, what's up?"

What thoughts or ideas have actually been communicated to Joey? Most people agree that the idea communicated by most questions is a request for information. For example, if someone asks you "What time is it?" they're communicating to you that they would like some information, namely the time of day. In (1), however, do you think Jimmy really wants information from Joey? How do you think he will react if Joey really starts to tell him what's up (generally understood to mean what's happening in his life)? If Jimmy is like most people, he'll get bored rather quickly. He'll also probably make a mental note never to ask Joey that kind of question again. Instead, he'll probably just say something like (2) and keep on walking.

(2)   "Hey, Joey, good to see you."

And why is this statement an easy substitute for the question in (1)? The answer is simple: because (2) conveys essentially the same "information and ideas" as (1), namely a greeting. In some cases, we use language not to express ideas or communicate information, but to perform social functions such as greetings. Expressions like the question in (1) are intended solely to perform social functions and do not really contain any other "meaning." Performing a social function is not the same as "conveying information."

To further dismiss the simplified communication-oriented definition of language, consider example (3):

(3)   Man says to woman at a bar: "You look lovely tonight."

Now, presumably it's possible that he merely wants to express an idea in his head, give her that information and be done with the interaction. However, most people would probably suspect that this man has an ulterior motive, and that by telling her she looks lovely, he may be able to influence her actions. In fact, it's entirely possible that he doesn't really believe this "idea" that he's expressed to her, yet he expresses it anyway. Why? Perhaps he believes a compliment is going to help him achieve some other purpose (we'll leave the exact nature of that purpose to your imagination). So, we see that in the case of some compliments, the use of language goes beyond the desire to "convey information."

The important point to get out of the preceding discussion is that language is far more complex than we realize. In fact, it's so complex that it's difficult to provide a nice, neat, concise definition of it. Instead of *defining* language, then, we'll *describe* it. We can describe language as a complex system involving ideas and expressions. Stated another way, when we use language, we put thoughts (ideas) into words (the expressions). Though this might seem straight-forward at first, upon closer inspection, we'll see that it's actually more complicated.

Let's begin with the link between ideas and expressions. Is it always as tight as we'd like it to be? In other words, do we always say exactly what we mean? Certainly not. Any teenager who has ever planned a telephone call to an admired boy or girl knows this well. No matter how much they rehearse exactly what they want to say, it never seems to come out as they had hoped. This problem connecting ideas and expressions is what leads countless teenagers (and adults) to jot down notes before making important phone calls to line up dates.

To further illustrate the complexity of language, we have to consider the situation in which we utter expressions. The fact of the matter is that a single set of expressions can have multiple meanings depending on the situation in which utter them. In other words, the ideas (or meaning) represented by our words are, at least to a certain extent, context specific. Consider (4) and (5):

(4) Teacher asks students in the back of a large lecture hall: "Is Zoe there?"
(5) X says to Y, who has just answered X's telephone call: "Is Zoe there?"

In (4), the teacher is expressing his desire for information, specifically whether a certain person is present in the classroom or not. If the students reply "yes," then the questioner is satisfied and the discussion moves on to other matters. In (5), however, if Y answers "yes" and hangs up, X won't be as satisfied as the teacher. This is because the expressions in (5), though identical to the expressions in (4), are used to express a different meaning (i.e. there is a different idea behind it). In (5), the meaning goes beyond a request for information about the presence of a person and includes a request to actually speak with the person. Thus, we see that, in some cases, the situation in which an expression is uttered can change its meaning. This is, indeed, complicated.

1.3 Focus on Expressions: The Nature of Words

An important point to raise when discussing language is the nature of the words we use to express ideas. The words we use are **signs** of our meaning, but what is it about them that makes their meaning clear? Consider the words in (6):

(6) water, agua, su

Even if you don't recognize the third word, you can probably guess what it means based on the other two words. All three of these words are used to represent the meaning of H_2O in different languages —"agua" is the Spanish word for water, and "su" is the Turkish word for water. Notice, however, that while they have the same meaning, the words are completely different on the surface. That is, they don't sound alike at all, which leads us to conclude that there's no inherent connection between the words and their meaning. If there were some inherent connection between the words we use and their meanings, then every language would use the exact same words. This, however, is certainly not true. There is nothing inherent in the sounds w-a-t-e-r or a-g-u-a that indicates the meaning of these words. Instead, English's use of w-a-t-e-r, Spanish's use of a-g-u-a, and Turkish's use of s-u are completely *arbitrary*. This is illustrated by the fact that these different languages have different words for H_2O, yet all three of the words represent the same meaning to speakers of the languages. Our understanding of "water" as H_2O is based only on our agreement, as English speakers, that we will use the sign "water" to represent this meaning. People who do not speak a word of English, however, are not in on this agreement, and cannot connect the sign word with the meaning H_2O. The point here is that most words are completely arbitrary.

While the overwhelming majority of words in any language, like the words in (6), are completely arbitrary signs, there are some words that do, at least in some way, indicate their meaning. The most obvious examples are like those in (7):

(7)   meow, moo

The words we use to represent animal noises generally sound somewhat, though not exactly, like the actual noises they represent. Thus, unlike the words in (6), there is some inherent connection between the words in (7) and their meanings. It is not an arbitrary choice to use "meow" for a cat's noise and "moo" for a cow's. Instead, the choice is based on something real in the world. Specifically, the pronunciation of the word is similar to its meaning, which is the sound the word represents. Words like the ones in (7) are examples of **onomatopoeia**. Onomatopoeic words are ones that do, in some way, indicate their meaning. These words, therefore, are *not* completely arbitrary signs.

Further evidence for onomatopoeic words not being completely arbitrary comes from other languages. For example, if you ask people who speak other languages what the word for a cat's noise is in their language, chances are that the word will be similar to the English "meow." This makes sense, because the word is, after all, onomatopoeic; and cats sound the same, regardless of the language the humans around them speak. Table 1.1 provides cross-linguistic examples of onomatopoeia.

meaning	English word	Arabic	Chinese	Japanese
cat's sound	meeyow	mowmow	mayow	neeyow
rooster's sound	cockadoodledoo	keekeekees	coocoo	kohkaykoko

Table 1.1: Onomatopoeic Words (adapted from the Department of Linguistics, p. 16)

What you should notice is that the words, while *similar* across all the languages, are *not* identical. In fact, it's impossible to find a word that is universal to all languages. If one were to exist, it would be a completely non-arbitrary sign, and such signs simply do not exist in

human language. In other words, there are no completely non-arbitrary words in language. For completely non-arbitrary signs, we need to look to nature. For example, the presence of smoke is a completely non-arbitrary sign that there is fire in some form. Human language, on the other hand, has no such signs.[1]

So, you're probably wondering at this point how a system with so much arbitrariness can work. The answer lies in the word "system." Language is not just a bunch of words thrown together; instead, it's very *systematic*, and when native speakers of a language speak their own language, they unconsciously follow a set of complicated rules. This set of rules is often referred to as **grammar**, a word that often evokes painful memories for some people. A language's grammar is what allows its speakers to make sense out of its arbitrary signs. In the next section, we will explore the nature of these grammar rules.

1.4 The Nature of Grammar Rules: Prescriptivism vs. Descriptivism

Perhaps one of the reasons people have negative feelings toward grammar is the approach to grammar that is generally taken in schools. Specifically, grammar is presented as a set of rigid rules that must be followed by anyone who wants to be considered a "good" or "correct" speaker of a language. Naturally, any approach of this nature sets people up for failure if they do not conform exactly to the standard that's been set. It's no wonder, then, that many people grow up disliking grammar. No doubt, people's early experiences with grammar have contributed significantly to the second misconception:

Misconception #2: Linguistics is concerned with trying to make people speak "properly".

Linguistics teachers hear this from students all the time. Often students report that by taking a linguistics class they hope to learn to speak "better" English. Their assumption is that this is the purpose of a linguistics course. This is certainly not the case. Rather than *prescribe* to students how they should speak a language, linguistics is mainly concerned with *describing* how people actually do speak. This distinction is generally referred to as **prescriptivism** vs. **descriptivism**.

1.4.1 Prescriptivism

As the term suggests, someone who subscribes to a prescriptive approach to grammar, believes that there is a prescribed (written before, or ahead of time) list of rules to which all speakers of a language must conform. Those who do not conform are said to be speaking "incorrectly" and in some cases are labeled "linguistically deficient." It's understandable that many people take this view of grammar. After all, this is the approach taken in most language instruction. A quick glance at any foreign language textbook confirms this. Chapters usually begin with the statement of a rule. This prescribed rule is then modeled using a variety of examples. After that, there are exercises for the students to practice the rule that they've learned. This is clearly a prescriptive approach.

Prescriptivism is not, however, limited to the foreign language classroom. You've probably learned many prescriptive rules of English during the course of your education, most of

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[1] For more on the nature of words, see Appendix 1.1.

them in English or composition classes. The "rules" in (8) represent two of the more common prescriptive rules of English.

(8) a. It's ungrammatical to end a sentence with a preposition.
     b. It's ungrammatical to split an infinitive.

If you violate these rules, as we have in the sentences in (9), you have, in the eyes of a prescriptivist, spoken ungrammatical English.

(9) a. Linguistics is what I live for.
     b. Captain Kirk wants to boldly go where no man (or woman) has gone before.

The problem for prescriptivists, however, is that these sentences sound perfectly good to nearly all native English speakers and sentences just like these are spoken regularly by native English speakers. These facts make declaring the sentences in (9) "wrong" difficult and, in fact, foolish. We'll address this "problem" in the next section.

1.4.2 Descriptivism

What you will soon see, hopefully, is that prescriptivism ignores reality. First, while formal foreign language instruction is, as has been noted, generally prescriptive, first language acquisition is clearly not. Nearly every person reading this book learned a language fluently by the age of five, and with very few, if any, exceptions, none of you read about or was taught any grammar rules during this time. The sacred list of prescribed rules that the prescriptivist adheres to did not play a role in your acquisition of your first language. In fact, most of you probably never encountered a stated grammar rule until you were at least 12 or 13 years old, if then, long after you learned to speak your first language.

Consider also the fact that nearly every single one of you reading this book violates the rules in (8) on a regular basis. In fact, the examples in (9) that violate these rules probably sound just fine to nearly all of us. If native speakers of English end sentences with prepositions and split infinitives regularly, who are these prescriptivists to claim that such English speakers don't know how to speak their language? This is a claim that we should all object to (note the sentence final preposition).

To further illustrate the absurdity of prescriptivism, consider the origin of prescriptive rules, in particular the prescriptive rule prohibiting the splitting of infinitives, as in (9b). In the 18th century there was a movement among grammarians to standardize English, and when questions arose about which forms should be deemed "correct," they were often answered by using classical languages, Greek and Latin, as models[2]. In Latin, infinitive forms consist of a single word. Examples are the verbs "vocare" (to call) and "vertere" (to turn). Thus, in Latin, it's impossible to split an infinitive. In English, however, infinitives consist of "to" plus the verb (as in "to call" and "to turn"), giving rise to the possibility of splitting an infinitive, such as the infinitive "to go" that's split in (9b). To attempt to make the rules of one language, English, conform to the rules of another, Latin, can only be described as absurd.

Clarification #2: Linguists are concerned with describing how people actually speak.

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[2] See Barry (1998), pp. 4–5, for a more detailed discussion.

Rather than trying to prescribe how people *should* speak, linguists are interested in describing how they actually *do* speak. Descriptive grammar does not judge linguistic production as correct or incorrect; instead it observes what people say and describes it. Such an approach also involves surveying native speakers of a language to test their intuitions regarding what "sounds good" or "sounds bad" to them. The approach taken by a descriptivist is that whenever a native speaker of a language speaks, he or she is following a set of grammar rules. In other words, aside from the occasional slip of the tongue, all native speaker linguistic production *is 100% rule governed*. Recall also that linguistics is a scientific discipline. What kind of a scientist would engage in an inquiry in which he or she decided ahead of time what the results of an investigation should be? Naturally, the scientist will make hypotheses, but to not be open to finding results that disprove the hypotheses is very poor science indeed. Just as the physical scientist seeks to discover how the world really works, the linguist seeks to discover how language really works.

The descriptive linguist is well aware, however, that while all native speakers of a language follow a set of rules when they speak, they do not all follow the exact same set of rules. Consider the sentences in (10).

(10)   a. We love linguistics classes.
       b. *Love we classes linguistics.
       c. ?If I were you, I would take lots of linguistics classes.
       d. ?If I was you, I would take lots of linguistics classes.

No doubt you find (10a) perfectly grammatical, but you find (10b) wholly ungrammatical and would never expect to hear any native speaker of English uttering such a sentence (an asterisk before a sentence, as in (10b), indicates ungrammaticality). It's difficult to imagine any native speaker of English disagreeing with you. What this proves is that all English speakers share many (in fact, most) of the same rules. This makes sense; after all, if English speakers didn't follow many of the same rules, they wouldn't be able to communicate with each other. There is certain to be disagreement, however, among native English speakers regarding the grammaticality of (10c) and (10d) (a question mark before a sentence indicates questionable grammaticality). For some of you, (10c) is grammatical, while (10d) is ungrammatical; for others, the exact opposite is true; for others still, both are grammatical. Does this mean that some of us are right and others are wrong? If so, who's right, and on what basis do we make that determination? To a descriptive linguist, because sentences like both (10c) and (10d) are spoken regularly by native speakers of English, they are both grammatical for the people who speak them. (10c) and (10d) prove that while all native speakers of English share most rules, they do not share *all* rules. In fact, there is a significant amount of linguistic diversity among the speakers of any language. We will revisit this issue in more detail at the end of the book.

What this lack of consensus regarding grammaticality tells us is that to judge certain speakers as incorrect or deficient because they don't conform to a standard laid out by certain individuals, such as the eighteenth-century grammarians described earlier, is misguided. Linguists do not judge; they merely observe and describe. We will see that the *correct vs. incorrect* distinction is often less useful than *the appropriate vs. inappropriate* distinction. That is, when speaking with people who prefer (10c) to (10d), it would be more appropriate to use (10c), and while speaking with people who prefer (10d) to (10c), it would be more appropriate to use (10d).

Much of what we do in this textbook is describe rules of English. Notice, however, the use of the word "describe." Our rules will be based on observation of real linguistic data, meaning real language. In some cases, we will use data already gathered, and in other cases we will generate our own. The important point, however, is that everything we do will be based on observation of real language, not a rule prescribed by some language "authority." In some cases, we might even feel the need to disagree with a dictionary. This is fine as long as we base our conclusions on real data. The examples in (11) illustrate this kind of disagreement with language "authorities."

(11) a. ?We don't need no prescriptive rules.
        b. ?My teacher don't believe in prescriptivism.

No doubt you've learned that both of the constructions in these examples are "wrong" and to be avoided at all costs. The fact of the matter is, however, that native English speakers use such constructions regularly, which proves that they're rule governed structures, rather than random "errors." Though the rules that govern these structures are definitely *non-standard*—a term to be defined shortly—and thus inappropriate in formal contexts, they are systematic nonetheless. This might not sit well with you at first, but hopefully by the end of the term you'll see the sense in such an approach to non-standard constructions, because this approach acknowledges reality.

You'll see that the process of linguistic inquiry that we employ is a very scientific one that should remind you of your first junior high school science class. Specifically, we will use a "scientific method" of investigation. Just as in a physical science class we will follow certain steps, as illustrated in (12).

(12) step 1: observe (we will gather real language data and analyze it)
        step 2: hypothesize (based on our observations, we will hypothesize a rule)
        step 3: test (we will gather additional data to test our hypothesis)
        step 4: conclude (we will write a final rule based on our observations and tests)

Notice that it's not until the very end that we will write our rules, and that our rules will be determined by observing reality first. This is a true *descriptive*, as opposed to *prescriptive*, process.

1.4.3 Prescriptivism vs. Descriptivism over Time

Attitudes about language have changed over the course of the past few hundred years. As was mentioned previously, in the 18th century, there was a movement to prescribe English language use. English grammarians even went so far as to attempt to establish an official academy that would regulate the use of English. Though their efforts failed, they set out on their own to achieve their goal by publishing grammar books and dictionaries in which they prescribed usage. This prescriptive approach dominated dictionary publishing for over a hundred years, and to this day most dictionary users view these reference books as prescribers of use.

Beginning in the late 19th century, however, attitudes about language began to change, and dictionary publishers shifted their focus from prescribing use to describing it. This approach is favored even more strongly today, with dictionary publishers hiring large staffs to monitor

current usage and add, subtract and adjust entries to reflect that usage[3]. Though this approach makes perfect sense given our understanding of the folly of prescriptivism, it's also somewhat ironic considering most people's view of dictionaries as prescribers of language use. We might not realize it, but dictionaries don't *tell* us how to speak, they *reflect* how we speak.

1.4.4 Descriptivism and the Language Arts Curriculum

At this point, you may be wondering how descriptivism fits into language arts instruction. If whatever native speakers say regularly is grammatical, what are we supposed to teach? To begin with, many of the students in US classrooms today are not native speakers of English. For these students, even the native speaker consensus that is illustrated in (10a) and (10b) is not necessarily shared. Much of their early English production might not be governed by a clearly defined set of rules. Instead, it might be constructed partially through guessing; or it might be influenced partially by rules of the students' native languages. Therefore, rules like the ones governing (10a) and (10b) that we discover through a descriptive process sometimes need to be explicitly taught.

Next, for native speakers of English, the concept of appropriateness mentioned earlier is important when determining the relevance of descriptive grammar to classroom instruction. While all varieties of English are inherently equal, some are more appropriate in certain contexts. For people to be successful in our society, knowing how to speak the **standard** variety of English, meaning the one that's accepted in formal contexts, is of tremendous importance. The descriptive linguist realizes this, and, while being careful not to judge **non-standard** production as incorrect, works to teach his or her students the systematic differences between the two and how to produce the standard variety in the appropriate contexts.

To illustrate the concept of standard vs. non-standard, we can return to the questionable examples in (10). For some native speakers of English, (10c) is "correct" while for others (10d) is preferable. Only one of these, however, is considered standard (decide on your own which one you think is standard). In some cases, native speakers need to be taught the standard form if the non-standard one is what they've internalized. This must be done carefully, though. Imagine being told that what sounds right to you, what you've grown up with your whole life, is just plain *wrong*, while some other structure that sounds awkward is actually *correct*. For many of you, relating to this will be easy, because while many of you prefer (10d), in fact, (10c) is considered standard. If this is hard for you to swallow, you can relate to what many students of non-standard speaking backgrounds go through when trying to learn the standard variety.

1.5 Narrowing the Focus: English and other Languages

Up to this point, we have focused on the study of language in general. Now, let's shift our attention to specific languages, English in particular. As was noted earlier, English is just one of many examples of the phenomenon of human language, and as such it's both similar to and different from all the many other examples. We'll begin with the similarities. Modern linguistics has demonstrated that there are certain **universals**, or shared features, across human languages. In a very broad sense, one of these universals is complexity. The first fundamental concept of linguistics listed on page 1 is that every language is enormously complex. Every language is a complex system of rules that speakers of that language acquire at an early

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[3] See Barry (1998), pp. 6-7, for a more detailed discussion.

age and use throughout their lifetimes. There are complex rules that govern how humans use speech sounds; for example, the rules of English don't allow the "ng" sound to be at the beginning of a word. There are complex rules that govern how humans form words; for example, the rules of English don't allow the "-ing" ending to be added to a word like "magazine." And there are complex rules that govern how humans form sentences; for example, the rules of English don't allow the order "magazine the thick is" but they do allow the order "the magazine is thick." The fact that there are rules at every level is true for every language.

However, while every language is governed by a complex set of rules, the specifics of those rules vary from language to language. An important point to keep in mind when studying language is that not all languages are structured the same way; nor are there "better" or "worse" ways for languages to be structured. What a native English speaker considers to be "normal" or "logical" in language might be completely foreign and unfamiliar to someone whose first language is not English. Conversely, what seems completely "normal" or "logical" to a speaker of another language might be foreign to a native English speaker. This is part of what makes learning a second language so difficult. It is essential for teachers working with non-native speakers of the language of instruction to understand this. Throughout this text, we will examine differences between English and other languages to make this point clear and to help you appreciate some of the difficulties your non-native speaking students face.

1.6 Tying It All Together: The Relevance of Linguistics

Before we begin our exploration of English, and language in general, we need to stop and consider the relevance of linguistics to classroom teachers. Frequently, students complain that they don't see the point in studying linguistics. Many of them are already classroom teachers, they argue, and have been for several years, so why do they need to learn something new? This attitude leads us to our final misconception of the chapter:

Misconception #3: Linguistics is not relevant for primary and secondary school teachers.

Nothing could be further from the truth. While the students' complaints are, on one level, legitimate, they are very misguided on another. What this means is that while it's true that no one *needs* linguistics to be a teacher, we would argue that to be the *best* teachers they can be requires a great deal of knowledge, including, but not limited to, linguistic knowledge. To use a confusing, but accurate, saying, "we don't always know what we don't know." One of the goals of this textbook is to help you realize in a conscious way what you didn't previously know about language, and to encourage you to use your new knowledge in your classrooms.

Clarification #3: Linguistics is highly relevant for primary and secondary school teachers.

Regardless of the subject or subjects you teach, language is involved. While language obviously plays a larger role in language arts than in other areas, it is certainly not limited to language arts. If you're teaching history, language is involved. If you're teaching math, language is involved. Because you will be using and responding to language in your classroom, having a greater conscious awareness of it will make you a more effective teacher. You're probably having a difficult time seeing exactly how right now, but hopefully, by the end of the term, it will be clear to you. Remember, the usefulness of linguistics depends to a great

extent on the creativity of the teacher. You need to be active in your application of linguistic knowledge in your classroom.

1.7   Summary

In this chapter we previewed the course by learning about what linguistics is and is not, and in the process we uncovered some of the most common misconceptions about the field. We studied language as a general phenomenon and took a look at English in particular. We also investigated the nature of linguistic rules. Finally, we considered the relevance of linguistics to education professionals, specifically primary and secondary school teachers.

Misconceptions	Clarifications
#1: Linguistics is the study of specific languages with the goal of learning to read, write or speak them.	#1: Linguistics is the scientific study of the phenomenon of human language.
#2: Linguistics is concerned with trying to get people to speak "properly".	#2: Linguists are concerned with describing how people actually speak.
#3: Linguistics is not relevant for primary and secondary school teachers.	#3: Linguistics is highly relevant for primary and secondary school teachers.

2

Phonetics: The Sounds of English

Phonetics is the study of the sounds of language. Our goals in this chapter will be the following:

- to recognize the linguistic sounds of English
- to describe the features of these linguistic sounds
- to represent these linguistic sounds using phonetic **orthography** (writing symbols)

2.1   Phonetics: Its Relevance to Classroom Teachers

Often students in education programs ask why they need to study phonetics. One response to this question is that you never know when or how phonetics, or any other area of linguistics, will be useful in a classroom. As we noted in Chapter 1, much of this depends on the creativity of the individual teacher. In addition to this, we can easily identify some specific applications. First, nearly all teachers must pass a series of standardized tests to receive their credential. Some of these tests include material from phonetics, an example being the RICA (Reading Instruction Competency Assessment) test, which is given to many teacher candidates in the state of California. Such tests require candidates to have a working knowledge of terms such as "phoneme" and concepts such as "phonemic awareness," because these are concepts that have direct applications in instruction, particularly reading instruction. Learning the terms and concepts required to pass standardized tests is reason enough to study phonetics.

Beyond simply helping a candidate qualify for a teaching position, however, phonetics can be invaluable to teachers as they practice their trade. This is particularly true in the case of reading instruction. Over the years, literacy professionals have gone back and forth regarding the best method to teach reading. In the 1980s and early 1990s, a theory called **Whole Language** gained favor. According to this theory, students would naturally acquire the ability to read by being exposed to "quality" literature. The results of this approach alone, however, were mixed, with many students reading at a level far below their grade. This led to a return to a **phonics**-based approach, in which students were encouraged to sound words out as they read them[1]. As you may have guessed, *phonics* and *phonetics* are closely related. Because current preferences in the school systems favor a combination of *both* whole language and phonics, anyone who intends to teach literacy skills would do well to understand phonetics.

This is true not only of reading specialists at the elementary school level, but also of teachers of a variety of subjects at the secondary level. Unfortunately, not all students enter

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[1] For a brief and very accessible discussion of this issue, see "How Should Reading Be Taugh?" by Rayner et al. In *Scientific American*, March 2002.

high school reading at the appropriate level. Some high school students read so far below level (as low as a first-grade level, according to some reports[2]) that they require very basic remedial instruction. And while many schools now offer special reading classes at the high school level, teachers of other subjects often find themselves providing some kind of reading instruction. Therefore, it behooves *all* teachers to have an understanding of the fundamental concepts of phonetics.

2.2 Spelling and Sounds in English

As the previous section suggests, learning to read is not a simple task, nor is teaching reading. These tasks can be particularly difficult in English because of the language's spelling system. While sounding out words, as in a phonics-based approach to reading, is generally considered effective, it can also lead to problems, because it isn't always easy to predict the sounds of an English word based on its spelling. As nearly anyone who has ever attempted to learn how to read and write in English can attest, English **orthography** (its writing system) is not easy to learn. Often, it seems that there's no rhyme or reason to English spelling.

To call attention to this reality, George Bernard Shaw once pointed out that English orthography allowed for the spelling "g-h-o-t-i" to represent the word "fish." His reasoning was that the letters "g-h" could represent an "f" sound, as in "rou<u>gh</u>," while the letter "o" could represent a short "i" sound, as in "w<u>o</u>men," and the "t-i" spelling could represent an "sh" sound, as in "no<u>ti</u>on." This example highlights what we already know—namely that English spelling is not very phonetic; that is, a reader often can't predict the exact sounds of a word based on its spelling. Why is English spelling the way it is? Without getting into too much detail, we can boil it down to a few factors:

A. Spoken language varies tremendously over time and space, but written language is fairly constant and resistant to change

Just as the English spoken in the United States is different from the English spoken in Scotland, the English spoken today is different from the English spoken 200 years ago. The fact of the matter is that spoken language changes constantly. This is not always the case, however, with written language, and there are some practical reasons for this resistance to change in written language. For one thing, it allows for **mutual intelligibility** across regions. Thus, an English speaking person from Scotland can write a message to an English speaker in the US and be perfectly understood. Because this intelligibility is mutual, the American can just as effectively communicate in writing with the Scot as the Scot can with the American. Another advantage of a constant written language is that it allows for relative permanency of written documents. If written language were to change as much as spoken language, we might not be able to understand written documents from just a few hundred years ago.

B. English has been influenced greatly by other languages.

As we will see in Chapter 4, English has borrowed a tremendous number of words from other languages. In some cases, we've borrowed them as is, while in other cases we've adapted them somewhat; but in either case, the origin of the words is some other language. When

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[2] See Moran (2000) for a more detailed discussion.

these words are borrowed with their original spellings, spelling problems can occur. An extreme example is the word "hors d'oeuvres." Even a spelling bee champion would probably have trouble with this word because of the French spelling, which is unfamiliar to readers and writers of English. You can see, then, how the diverse origins of English contribute to its spelling difficulties.[3]

Even with these seeming irregularities and inconsistencies, however, a phonics-based approach to reading remains popular among education professionals. This is because while there isn't a perfect correspondence between spelling and sound in English, there is at least some connection, and using this connection can be a useful part of beginning reading instruction. The main purpose of the rest of this chapter is to familiarize you, at a very conscious level, with the speech sounds of English.

2.3   The Smallest Units of Language: Phonemes

Having prefaced our discussion of phonetics with a discussion of the usefulness of phonetics for teachers and complications associated with English orthography, let's return now to our primary focus—spoken language. Every language has its own inventory of sounds that speakers of that language recognize as being *linguistic* sounds (as opposed to, say, the sound of a belch). These sounds are called **phonemes**. A phoneme can be defined as a psychologically real unit of linguistic sound. The cumbersome definition is necessary, though you might not fully understand why until Chapter 3 when we explore the psychological realities of speakers with regard to sounds in more detail.

Another way to think about phonemes is to consider that, while many sounds exist in the world, only some of these sounds are used in human language. For example, the belch mentioned earlier and other bodily functions are not part of language. Furthermore, of all the sounds that are part of the world's human languages, only a fraction of those sounds are used in any one given language. It is only the sounds that are used in a person's language that are linguistically real to a speaker of that language. Believe it or not, some of the sounds of English, sounds that you have been familiar with since birth if you are a native English speaker, are not even recognizable to speakers of other languages, and vice-versa. This will become an important issue later in Chapter 3.

Our goals in this chapter, as stated earlier, are to recognize, describe and represent the phonemes of English. We will begin with a discussion of oral anatomy in which we'll identify the organs of the vocal tract. We will then describe the **articulatory features** of each phoneme, meaning we will describe how and where each phoneme is produced in the vocal tract.[4] Finally, we will represent each sound using a phonetic alphabet. In many cases, the symbols we use in our phonetic alphabet will be familiar to you, but in others, the symbols will be new. Don't worry, though, because by the end of the chapter, you will be transcribing back and forth between English orthography and phonetic orthography with ease.

Before proceeding, it would be wise to spend a minute discussing the importance of using a phonetic alphabet. As we have seen, in English orthography, the symbols we use don't always correspond very closely to the sounds they're supposed to represent. The whole point behind a phonetic alphabet is to clear up this confusion. In a phonetic alphabet, there is a single symbol for each sound (phoneme). Also, each phoneme is represented by a single sym-

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[3] For more on English spelling and its history, see Algeo & Pyles, 2004.
[4] For more on the way we describe phonemes, see Appendix 2.1.

bol.[5] The clarity created by this bi-directional relationship is essential in the study of phonetics because this clarity eliminates any possibility for confusion when representing sounds.

2.4   The Consonants of English

Phonemes can be divided into two types—*consonants* and *vowels*. We'll begin with the **consonants** of English. When we use the word "consonant," however, we mean something different from what you're probably thinking. We're not referring to letters; remember, our focus is on spoken, not written, language. Instead, we're referring to *sounds* (phonemes). Consonant sounds are produced by obstructing the flow of air as it passes from the lungs through the vocal tract. As you will see, this obstruction occurs in different places and different manners, and we can describe each consonant sound in a unique way by applying these concepts of *place* and *manner*.

2.4.1   Describing the Features of Consonants: Place of Articulation

The organs of the vocal tract are shown in Figure 2.1. Notice the orientation of this figure, with the head facing left. This is important, because when phonemes are represented in charts, the charts are always organized according to this orientation, with the front of the vocal tract to the left and the back to the right.

When we describe a consonant, one of the features we use is its **place of articulation**. As was noted earlier, consonants are formed by obstructing the flow of air through the vocal tract. We obstruct the flow of air in different places—see Figure 2.1—to make different consonants. For example, to form the initial "p" sound in "pill" (represented by the phonetic symbol /p/), we put our lips together to shut off the flow of air before releasing it. Sounds like /p/, that are created by obstructing the flow of air with both lips, are called **bilabial** sounds ("bi-" meaning two, and "labial" meaning lips). Compare the place of articulation of /p/ with the place of articulation of the "f" sound in "fill" (represented by the phonetic symbol /f/). Rather than obstructing the flow of air with both lips, we obstruct it with our lower lip and upper teeth. Sounds like /f/ are called **labiodental** sounds ("labio-" meaning lip, and "dental" meaning teeth).

Before we continue, we need to address the slashes (//) surrounding the symbols used to represent sounds. Whenever we use symbols from our phonetic alphabet, we'll use these slashes. Thus, /p/ represents the phoneme /p/, not the letter "p". When we want to make a reference to the letter "p" from the English alphabet, we'll enclose the symbol in quotation marks (" "). This notation distinction is an important one. Also, when we make a reference to the phoneme /f/, we're referring to any spelling of this phoneme. So, the initial sound in "phone" is also an /f/, as is the final sound in "rough." One of the biggest challenges for beginning students of phonetics is to be able to distinguish between sounds and letters. At all times, keep in mind that a letter is not a sound and a sound is not a letter.

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[5] For a more detailed discussion of phonetic alphabets, see Appendix 2.2.
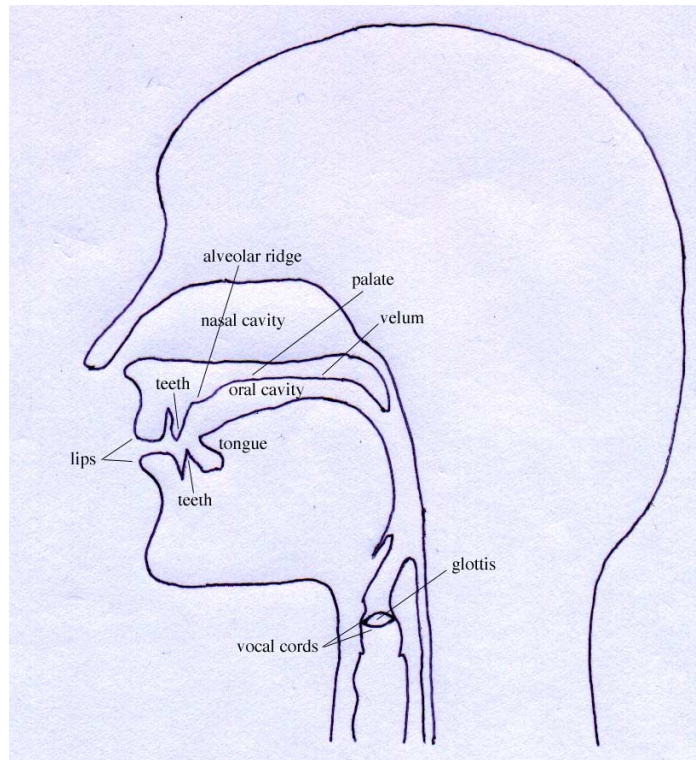
Figure 2.1: The Vocal Tract

Continuing on our way towards the back of the vocal tract, pronounce the word "thin" and focus on the initial "th" sound, represented in phonetic orthography by /θ/ (often called "theta"). While you might think of this /θ/ sound as being two sounds because it's represented in English orthography by two letters, in fact it is a single sound. Notice that we produce this sound by putting our tongue between our teeth and obstructing the flow of air with the tongue and teeth. Because of this, sounds like /θ/ are called **interdental** sounds ("inter-" meaning between, and "dental" meaning teeth). Notice that the phonetic symbol used to represent this interdental sound is not one used in English orthography. What you'll see is that new symbols are generally used when English orthography uses multiple symbols for a single sound, as is the case with the "th" sound. Spellings like the "th" spelling are often called **digraphs** ("di-" meaning two) because two letters are used to represent a single sound.

Next, consider the initial "s" sound in the word "sack," represented by the phonetic symbol /s/. To create the /s/ sound, we obstruct the flow of air by placing the tip of our tongue up near the hard, fleshy part of the roof of our mouth directly behind the upper front teeth. This area is called the **alveolar ridge**. Sounds like /s/, then, are called **alveolar** sounds. Now, pronounce the word "sack" and focus on the initial consonant sound. Compare this sound to the initial sound in "shack." Notice how your tongue moves back slightly to make this sound. Instead of being raised to the alveolar ridge, it is raised to the hard palate of your mouth, just behind the alveolar ridge. This initial "sh" sound in "shack" (represented by the symbol /š/ and called "esh"), as well as other sounds produced in the same place, are called **palatal** sounds. Again, notice that the new symbol is used in place of an English digraph, in this case "sh."

If you trace your tongue back along the roof of your mouth from the alveolar ridge and past the palate, you'll come to a softer area. While this area is often referred to as the soft palate, its more technical name is the **velum**. We produce some sounds by obstructing the flow

of air by touching our tongue to the velum. These sounds, therefore, are called **velar** sounds. An example of a velar sound is the initial /g/ sound in the word "get." Notice, however, that in contrast to the way you pronounced the alveolar and palatal consonants that we looked at before, to make this velar sound, you don't touch the tip of your tongue to the roof of you mouth; instead, you use the heel of your tongue.

Finally, our journey to the back of the vocal tract ends with the **glottis**. This is essentially the beginning of your throat. English has only a single **glottal** phoneme—the initial /h/ sound in the word "hot." Notice how your tongue is not involved in the production of this sound at all (if it were, you'd probably choke yourself). Instead, you obstruct the flow of air by tightening the glottis as the air passes through and obstructing it at that point.

We can represent all of the sounds we have studied so far, along with the places of articulation used in English, in Table 2.1.

Bilabial	Labio-dental	Inter-Dental	Alveolar	Palatal	Velar	Glottal	Examples
/p/							pin
					/g/		gust
	/f/	/θ/	/s/	/š/		/h/	fin thin sin shin hit

Table 2.1: Some English Consonants by Place of Articulation

2.4.2 Describing the Features of Consonants: Manner of Articulation

In addition to place of articulation (*where* a sound is produced), when we describe a consonant, we describe its **manner of articulation**, meaning *how* the sound is produced. As you know, consonants are formed by obstructing the flow of air through the vocal tract in particular places. It's also important to note, however, that we can obstruct the flow of air in different *ways* to produce different sounds. As we did in our discussion of place of articulation, let's compare the /p/ sound in "pill" and the /f/ sound in "fill." We know that /p/ is bilabial and that /f/ is labiodental, but they also differ in another way. Notice that when you produce the /p/ sound, you completely stop the flow of air and then release it. In the production of the /f/ sound, however, you never completely stop the flow of air; rather, you force air steadily through a narrow opening, created with your lower lip and upper front teeth, in a steady stream. This is a difference in manner of articulation.

To prove the significance of manner of articulation, let's compare two phonemes that are identical in their place of articulation. To produce the /t/ sound in "tack," you raise the tip of your tongue to the alveolar ridge and obstruct the flow of air there. To produce the /s/ sound in "sack," you do the same. If we only use place of articulation to describe consonants, we have no way of distinguishing between /t/ and /p/ because they're both alveolar consonants. Notice, though, that to produce /t/, you must completely stop the flow of air, as you did with /p/. Sounds like /t/ and /p/, that are produced with this complete stoppage are called **stops**. This term speaks for itself. To produce /s/, however, you do not completely stop the flow of air. As we noted before with /f/, you create a narrow opening through which you force a steady

stream of air. Sounds like /s/ and /f/ that are produced with this partial obstruction are called **fricatives**. To make sense out of this term, think of the friction that you create when you force air through a narrow opening, like a cracked window. The same phenomenon occurs with sounds like /s/ and /f/ and it is this friction that gives fricatives their name.

Quick Exercise 2.1

Of the phonemes discussed so far, which are stops and which are fricatives? Pronounce each one and decide.

/p/   /s/

/θ/   /š/

/g/   /t/

/h/   /f/

Not all consonants are stops or fricatives. Consider the initial consonant sound in the word "<u>ch</u>ip." Although, as with other sounds represented by digraphs, it's spelled with two English letters—"ch"—it is, in fact, just a single sound that we represent with the phonetic symbol /č/, called "C-wedge" (again, notice that we need to use an unfamiliar symbol to represent a sound that English spells with a digraph). Pronounce this sound and try to determine where it's being produced. You'll probably notice that it's palatal, formed by touching the edges of your tongue to the palate. What sets this sound apart from the other ones we've seen so far, however, is that it's neither a stop nor a fricative, but it combines elements of both. Notice that it begins with a stop, /t/, and ends with a fricative, /š/. Pronounce it slowly and feel your tongue move. Sounds like /č/, which are a combination of a stop and a fricative, are called **affricates**. Appropriately, affricates are placed just below stops and fricatives in consonant charts (see Table 2.2).

All three types of consonants that we have studied so far—stops, fricatives and affricates—can be grouped together in the larger category **obstruents**. Obstruents are characterized by significant obstruction of air. While all consonants are produced through obstruction of air, not all of them involve such significant obstruction. Consider, for example, the initial /m/ sound in the word "<u>m</u>op." Clearly, like /p/, this is a bilabial sound created by putting both lips together. However, while /m/ and /p/ share the same *place* of articulation, note the important difference in their *manner* of articulation. You can prove that /m/ is not a stop by extending the sound. You can hold an /m/ sound for several seconds (until you run out of breath), while you cannot hold /t/ or any other stop consonant. But now try sustaining /m/ while holding your nose and you'll see that it becomes difficult. The reason it's difficult is because the sound /m/ is produced not by *stopping* the flow of the air, but by *redirecting* it through the nose, instead of the mouth. You do, in fact, cut off the flow of air through the mouth by putting your lips together, but you allow the air to escape unimpeded through the nose, rather than stopping it entirely, as with a stop. Sounds like /m/ that are produced with this manner of articulation are called, appropriately, **nasals**. The other two nasal phonemes in English are the alveolar /n/, as in "<u>N</u>ancy," and the velar /ŋ/, called "Eng"), which is generally represented by the "ng" spelling in English in words like "si<u>ng</u>". Once again, we have an unfamiliar symbol for a sound that English spelling represents with a digraph.