
CHAPTER 1

INTRODUCTION

- ◆ ALPHABETIC LETTERS, SPEECH SOUNDS, AND THE INTERNATIONAL PHONETIC ALPHABET
- ◆ BASIC TERMS AND DEFINITIONS
- ◆ REVIEW VOCABULARY
- ◆ EXERCISES

Text: Imagine that you are a game show contestant with a chance to win a huge cash prize. You have a partner in this contest with whom you must agree in order to win the money. What do you have to agree on? Just the pronunciation and meaning of words in a foreign language that neither you nor your partner knows anything about.

Does that example seem too far-fetched to you? Well, try this next one. Imagine that you teach voice and diction to students majoring in oral communications. Another teacher tells you that his ESL students (who speak English as a second, rather than first, or native, language)¹ are having trouble pronouncing the English *a*. Which *a*, you ask? The one in *apple*? In *bake*? Or maybe the one in *calm*?

The following list shows these objectives matched with chapter designations.

1. Numbered list: Develop Listening and Analytic Skills
 - Subbulleted list: Phonetic transcription, broad and narrow International Phonetic Alphabet (IPA): Chapters 1–6
 - Use of common syllables to indicate speech rhythm features: Chapter 6
 - Analysis of how speech units are produced: Chapters 2–6
2. Gain Knowledge and Understanding of Speech
 - Nature of orthographic systems: Chapter 1
 - Anatomy and physiologic processes of speech production: Chapter 2

¹Footnote: Phoneticians sometimes disagree over the concepts of coarticulation and assimilation. Some use the terms interchangeably, whereas other view coarticulation as the gestures that underlie pronunciation changes (Ohde & Sharf, 1992; Shriberg & Kent, 1982).

ED: Per conversation with Designer the H1 spec was changed to Trajan bold, all caps, 12/13, 1 line space above, 1/2 line space below. H2 spec was changed to Trajan bold, cap/small cap, rest of spec followed.

H1 HEADING: ALPHABETIC LETTERS, SPEECH SOUNDS, AND THE INTERNATIONAL PHONETIC ALPHABET

H2 HEADING: WORD ORIGINS

The difference between the spelling of words and their pronunciation results from a variety of factors. As spoken language grows, it changes, but written language is slower to follow.

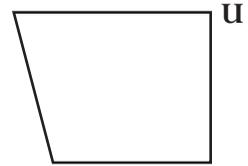
H3 HEADING: /u/

IPA symbol: Unnumbered list /u/

Descriptor: high, back, rounded, tense

Key Words: ooze, boot, too/to/two

Common spelling: oo



A major problem of orthography is that the Roman alphabet does not contain enough symbols to represent all the different English phonemes that you will learn to listen for.

H4 Heading: /u/ Production

Now that you are familiar with the structures involved in the speech process, we will discuss their integrated roles in speech production.

Initial	Medial	Final		
oodles	MCL moon	too do		
ooze	crew move	who drew		
oolong	doom rude	Q blew		
oops	fruit tomb	shoe through		
	group school	you flu		
	lose whom	true canoe		

The resulting, overlapping processes of respiration, phonation, resonance, and articulation together are responsible for the variety of sounds we use to transmit as oral language.

1. Closing of the glottis.
2. Increasing of air pressure beneath the glottis.
3. Bursting apart of the folds from air pressure with release of a “puff” of compressed breath.
4. Reclosing of the folds under constant muscle tension, with temporarily decreased subglottal air pressure drawing or “sucking” the folds back together.

A major problem of orthography is that the Roman alphabet does not contain enough symbols to represent all the different English phonemes that you will learn to listen for.

ls ___
le ___
ll ___

- Bulleted list: Closing of the glottis.
- Increasing of air pressure beneath the glottis.
- Bursting apart of the folds from air pressure with release of a “puff” of compressed breath.

A major problem of orthography is that the Roman alphabet does not contain enough symbols to represent all the different English phonemes that you will learn to listen for (Table 1–1).

H5 HEADING ORAL CAVITY The lips are the external boundary of the oral cavity. They are actually a complex of muscles and other tissues. For vegetative functions, they help receive and contain food and fluids in the oral cavity. In speech, they perform a variety of actions. For vowels, lip position can range from rounded to neutral to spread. These changes in shape contribute to the resonant pattern that characterizes different vowels. Several consonants are classified as **labial** (involving the lips). Some of these consonants are **bilabial** (both lips used), such as /b/, and others are **labiodental** (lips and teeth used), such as /v/. In most speakers, the lower lip is more mobile in rapid connected speech.

TABLE 1–1 INTERNATIONAL PHONETIC ALPHABET SYMBOLS: VOWELS AND DIPHTHONGS FOR MAINSTREAM AMERICAN ENGLISH¹

Primary orthographic symbols	IPA symbol	Key words
ee	/i/	beet, meat
-i-	/ɪ/	bit, kiss
-e-	/ɛ/	bet, less
-a-	/æ/	bat, pass
-oo-	/u/	pool, too
-oo-	/ʊ/	book, could
-aw-	/ɔ/	saw, caught
-o-	/ɑ/	bond, odd
-ur-	/ɜ/	turn, earth, bird (stressed)
	/ɝ/	hammer, under (unstressed)
-u-	/ʌ/	up, come (stressed)
-u-	/ə/	elephant, banana (unstressed)
a-e	/ei/	able, made, may (stressed)
a-e	/e/	vibrate, rotate (unstressed)
oa	/oʊ/	code, own, boat (stressed)
oa	/o/	obey, rotation (unstressed)
i-e	/aɪ/	kite, ice, my
ou	/aʊ/	out, loud
oi	/ɔɪ/	coin, boy, oil

¹Vowel symbols that are more characteristic of regional and cultural dialects will be introduced later in this book.

TONGUE The tongue (adjective, **lingual-/-lingua**) is composed of muscle and connective tissue and covered by the mucous membrane. It is of extreme importance for both biological purposes and speech. Its role in life functions is crucial: directing food to the back of the oral cavity in swallowing. Highly flexible and mobile, the tongue can shape the oral cavity almost infinitely. It arises from the floor of the oral cavity and is dually controlled by both intrinsic (within the tongue) and extrinsic (connecting the tongue to other structures) muscles. To understand the specific role of the tongue in vowel and consonant production, you need to be familiar with various tongue landmarks. The tongue itself has a root, apex, dorsum, septum, and frenum. The root is the posterior portion, connecting to the hyoid bone and the epiglottis. The anterior end of the tongue is its **apex**, and the superior (upper) surface, the **dorsum**. The **lingual septum** is actually a midline structure of connective tissue. The front tongue undersurface is connected to the mandible by the **lingual frenum**. In describing speech articulation, we refer to various landmarks on the tongue surface: **back**, **middle**, **front/blade**, and **tip** (see Figure 2–2). Consonants such as /s/ and /t/ involve the tip, whereas /k/ and /g/ involve the back. In producing consonants and vowels, the tongue shape can vary from broad to narrow, flat to curled, and whole tongue positioning to differential positioning of tongue segments. All the vowels and most of the consonants require tongue action. Only /m/, /p/, /b/, /f/, and /v/ do not.

You will learn to recognize and transcribe the phonemes of English primarily within the context of words as you progress through this book and its accompanying workbook.

This is an extract. This puts these physiological and acoustic units into their language role: to signal differences in meaning. We can better understand how oral language can be made clear and understandable by learning about phonemes and transcribing them as units that differentiate meaning.

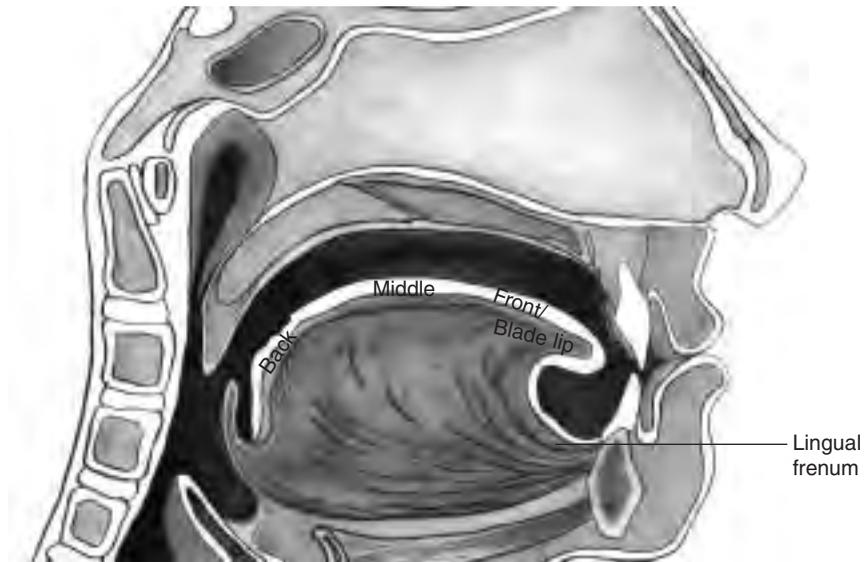


Figure 2–2 Tongue surface landmarks.

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REVIEW VOCABULARY

ACOUSTICS branch of physics concerned with the physical properties of sound.

ACOUSTIC PHONETICS study of acoustic features of speech and their relationship to speech production and speech perception.

ALLOPHONE examples of variations within a phoneme class; heard as one/same phoneme.

BROAD TRANSCRIPTION in IPA, transcribing in phoneme symbols only, without modifying (diacritical) markings to indicate allophonic or other phonetic differences; uses / /.

EXERCISES

As you learned in this chapter, the relationship between phonemes and their orthographic representation can be highly variable. The following exercises are designed to help you develop your listening skills and decrease your reliance on visual orthographic symbols. In each exercise, remember to focus on phonemes, not letters.

CONSONANT EXERCISES

- Orthographic consonant digraphs use two letters to stand for one phoneme. In the following words, circle each consonant digraph that actually is heard as a single phoneme.
thorn fresh father ledge chain long
wish phony think ring wreath then
- Two or more orthographic letters may be used to represent a single consonant phoneme. In the following words, circle the two consecutive consonants that represent a single consonant phoneme.
supper passing petting lotto berry willing
shrugged mall tripped scuff
- Orthography can include letters for which there is no corresponding phoneme (e.g., silent letters). In the following words, circle the letters that are silent/have no corresponding phoneme.
limb know mnemonic psychiatry gnash
knew psalm paradigm autumn
- Alphabetic letters do not always have a consistent one-to-one relationship with phonemes. In the following word lists, circle the two words that contain a different phoneme than the other four, even though the spelling is the same.
 - chain choose chorus cheek chill chic
 - sugar treasure insured conscience assure lose
- This time, circle all the words that contain the same phoneme, regardless of spelling/letters. Then, using Table 1–2, determine which IPA symbol represents the common sound.
 - zinc tans Susan leisure fuzzy pats / /
 - mission oceanic anchored sheep chance tissue / /
 - regal singe jump badge gyp single / /
 - island box sounds confusion pace mercy / /

REFERENCES

- Chomsky N, Halle M. (1968). *The Sound Pattern of English*. New York: Harper and Row.
- The International Phonetic Association (2002). The International Phonetic Association [online].
<http://www.arts.gla.ac.uk/IPA/ipa.html>.

ANSWERS TO CHAPTER EXERCISES

CHAPTER 1

CONONANT EXERCISES

1. thorn fresh father ledge chain long
wish phony think ring wreath then
9. a. train feign lane paper /eI/
b. break seat peas meet /i/