CHAPTER 12

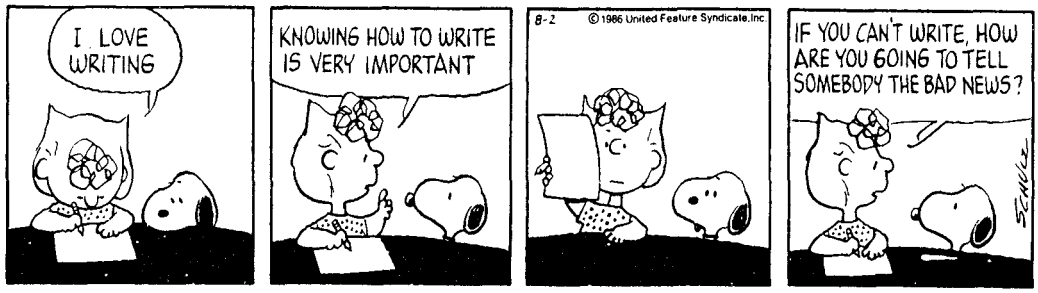
Writing: The ABCs of Language

The Moving Finger writes; and, having writ,
Moves on: nor all thy Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all thy Tears wash out a Word of it.

Omar Khayyám, *Rubáiyát*

The palest ink is better than the sharpest memory.

Chinese proverb



Throughout this book we have emphasized the spoken form of language. The grammar, which represents one's linguistic knowledge, was viewed as the system for relating the sounds and meanings of one's language. The ability to acquire and use language represents a dramatic evolutionary development. No individual or peoples discovered or

created language. The human language faculty appears to be biologically and genetically determined.

This is not true of the written form of human languages. Children learn to speak naturally through exposure to language, without formal teaching. To become literate, to learn to read and write, one must make a conscious effort and receive instruction.

Before the invention of writing, useful knowledge had to be memorized. Messengers carried information in their heads. Crucial lore passed from the older to the newer generation through speaking. Even in today's world many spoken languages lack a writing system, and oral literature still abounds. However, human memory is short-lived, and the brain's storage capacity is limited.

Writing overcomes such problems and allows communication across space and through time. Writing permits a society to permanently record its literature, its history and science, and its technology. The creation and development of writing systems is therefore one of the greatest of human achievements.

By *writing* we mean any of the many visual (nongestural) systems for representing language, including handwriting, printing, and electronic displays of these written forms. It might be argued that today we have electronic means of recording sound and cameras to produce films and television, so writing is becoming obsolete. If writing became extinct, however, there would be no knowledge of electronics for engineers to study; there would be, in fact, little technology in years to come. There would be no film or TV scripts, no literature, no books, no mail, no newspapers. There would be some advantages — no junk mail, poison-pen letters, or "fine print" — but the losses would far outweigh the gains.

The History of Writing

> An Egyptian legend relates that when the god Thoth revealed his discovery of the art of writing to King Thamos, the good King denounced it as an enemy of civilization. "Children and young people," protested the monarch, "who had hitherto been forced to apply themselves diligently to learn and retain whatever was taught them, would cease to apply themselves, and would neglect to exercise their memories."
>
> Will Durant, *The Story of Civilization 1*

There are many legends and stories about the invention of writing. Greek legend has it that Cadmus, Prince of Phoenicia and founder of the city of Thebes, invented the alphabet and brought it with him to Greece. In one Chinese fable, the four-eyed dragon-god Cang Jie invented writing, but in another, writing first appeared as markings on the back of the chi-lin, a white unicorn of Chinese legend. In other myths, the Babylonian god Nebo and the Egyptian god Thoth gave humans writing as well as speech. The Talmudic scholar Rabbi Akiba believed that the alphabet existed before humans were created; and according to Islamic teaching, the alphabet was created by Allah himself, who presented it to humans but not to the angels.

Although these are delightful stories, it is evident that before a single word was written, uncountable billions were spoken. The invention of writing comes relatively late

in human history, and its development was gradual. It is highly unlikely that a particularly gifted ancestor awoke one morning and decided, "Today I'll invent a writing system."

Pictograms and Ideograms

> One picture is worth a thousand words.
>
> Chinese Proverb

The seeds out of which writing developed were probably the early drawings made by ancient humans. Cave drawings, called **petroglyphs,** such as those found in the Altamira cave in northern Spain, drawn by humans living over twenty thousand years ago, can be "read" today. They are literal portrayals of life at that time. We don't know why they were produced; they may be aesthetic expressions rather than pictorial communications. Later drawings, however, are clearly "picture writings," or **pictograms.** Unlike modern writing systems, each picture or pictogram is a direct image of the object it represents. There is a nonarbitrary relationship between the form and meaning of the symbol. Comic strips minus captions are pictographic — literal representations of the ideas to be communicated. This early form of writing represented objects in the world directly rather than through the linguistic names given to these objects. Thus they did not represent the words and sounds of spoken language.

Pictographic writing has been found throughout the world, ancient and modern: among Africans, Native Americans including the Inuits of Alaska and Canada, the Incas of Peru, the Yukagirians of Siberia, and the people of Oceania. Pictograms are used today in international road signs where the native language of the region might not be understood by all travelers. Such symbols can be understood by anyone because they do not depend on the words of any language. To understand the signs used by the National Park Service, for example, a visitor does not need to know English. (See Figure 12.1.)

Once a pictogram was accepted as the representation of an object, its meaning was extended to attributes of that object, or concepts associated with it. A picture of the sun could represent warmth, heat, light, daytime, and so on. Pictograms thus began to represent ideas rather than objects. Such generalized pictograms are called **ideograms** ("idea pictures" or "idea writing").

The difference between pictograms and ideograms is not always clear. Ideograms tend to be less direct representations, and one may have to learn what a particular

Figure 12.1 Six of seventy-seven symbols developed by the National Park Service for use as signs indicating activities and facilities in parks and recreation areas. These symbols denote, from left to right: environmental study area, grocery store, men's restroom, women's restroom, fishing, and amphitheater. Certain symbols are available with a prohibiting slash — a diagonal red bar across the symbol that means that the activity is forbidden. (National Park Service, U.S. Department of the Interior)

ideogram means. Pictograms tend to be more literal. For example, the no parking symbol consisting of a black circle with a slanting red line through it is an ideogram. It represents the idea of no parking abstractly. A no parking symbol showing an automobile being towed away is more literal, more like a pictogram.

Inevitably, pictograms and ideograms became stylized and formulaic so that the masses of people could read them. The simplifying conventions that developed so distorted the literal representations that it was no longer easy to interpret symbols without learning the system. The ideograms became linguistic symbols as they came also to stand for the sounds that represented the ideas — that is, for the words of the language. This stage represented a revolutionary step in the development of writing systems.

Cuneiform Writing

Bridegroom, let me caress you,
My precious caress is more savory than honey,
In the bed chamber, honey-filled,
Let me enjoy your goodly beauty,
Lion let me caress you

Translation of a Sumerian poem written in Cuneiform

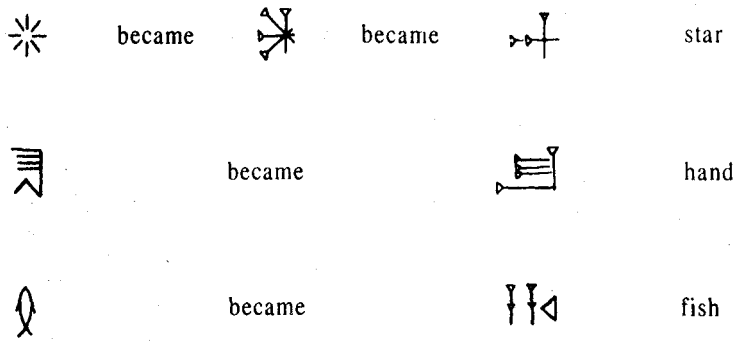
Much of what we know about writing stems from the records left by the Sumerians, an ancient people of unknown origin, who built a civilization in southern Mesopotamia (modern Iraq) more than six thousand years ago. They left innumerable clay tablets containing business documents, epics, prayers, poems, proverbs, and so on. So copious are these written records that scholars studying the Sumerians are publishing a seventeen-volume dictionary of their written language. The first of these volumes appeared in 1984.

The writing system of the Sumerians is the oldest one known. They were a commercially oriented people, and as their business deals became increasingly complex, the need for permanent records arose. An elaborate pictography was developed, along with a system of tallies. Some examples are shown here:

star, sky, God **hand** **corn** **5** **oxen**[1] **13** **fish**

Over the centuries the Sumerians simplified and conventionalized their pictography. They began to produce the symbols of their written language by using a wedge-shaped stylus that was pressed into soft clay tablets. The tablets hardened in the desert sun to produce permanent records far hardier than modern paper or electronic documents. Had the original American Declaration of Independence been written this way, it would not be in need of restoration and preservation. This form of writing is called **cuneiform** — literally, "wedge-shaped" (from Latin *cuneus,* "wedge"). Here is an illustration of the evolution of Sumerian pictograms to cuneiform:

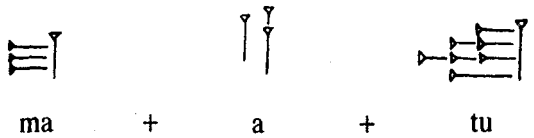
[1] The pictograph for "ox" evolved, much later, into the letter *A*.



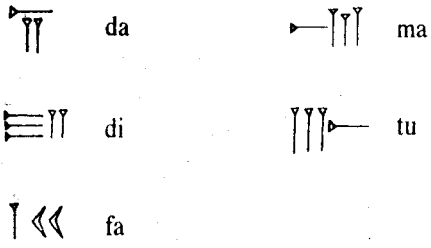
The cuneiform symbols in the right-most column do little to remind us (or the Sumerians) of the meaning represented. As cuneiform evolved, its users began to think of the symbols more in terms of the name of the thing represented than of the thing itself. Eventually cuneiform script came to represent words of the language. Such a system is called **logographic,** or **word writing.** In this oldest type of writing system, the symbol stands for both the word and the concept, which it may still resemble, however abstractly. Thus **logograms,** the symbols of a word-writing system, are ideograms that represent in addition to the concept, the word or morpheme in the language for that concept.

The cuneiform writing system spread throughout the Middle East and Asia Minor. The Babylonians, Assyrians, and Persians borrowed it. In adopting cuneiform characters, the borrowers often used them to represent the sounds of the syllables in their own languages. In this way cuneiform evolved into a **syllabic writing** system.

In a syllabic writing system, each syllable in the language is represented by its own symbol, and words are written syllable by syllable. Cuneiform writing was never purely syllabic. A large residue of symbols remained that stood for whole words. The Assyrians retained a large number of word symbols, even though every word in their language could be written out syllabically if it were desired. Thus they could write  *mātu* "country" as:



The Persians (ca. 600–400 B.C.E.) devised a greatly simplified syllabic alphabet for their language, which made little use of word symbols. By the reign of Darius I (522–468 B.C.E.) this writing system was in wide use. The following characters illustrate it:



Emoticons are strings of text characters which, when viewed sideways, form a face expressing a particular emotion. They are used mostly in e-mail and newsgroup messages to express a feeling about the text. They are a modern, pictographic system similar to cuneiform in that the same symbols are combined in different manners to convey different concepts. Most everyone who uses e-mail recognizes the smiley face :-) to mean "not serious" or "just joking." Several less common emoticons, and their generally accepted meanings, are shown here.

:'–(	"crying"
:–S	"bizarre"
:^D	"love it!"
:–)~	"drooling"

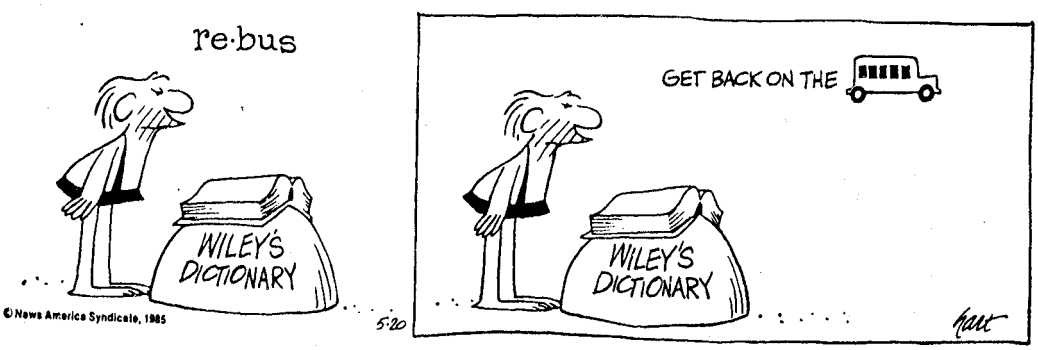
The invention, use, and acceptance of emoticons reflect on a small scale how a writing system such as cuneiform might have spread throughout a country.

The Rebus Principle

When a graphic sign no longer has a visual relationship to the word it represents, it becomes a **phonographic** symbol, standing for the sounds that represent the word. A single sign can then be used to represent all words with the same sounds—the homophones of the language. If, for example, the symbol ⊙ stood for *sun* in English, it could then be used in a sentence like *My* ⊙ *is a doctor.* This sentence is an example of the **rebus principle.**

A rebus is a representation of words by pictures of objects whose names sound like the word. Thus 👁 might represent *eye* or the pronoun *I.* The sounds of the two words are identical, even though the meanings are not. Similarly, 🐝🍃 could represent *belief* (*be* + *lief* = *bee* + *leaf* = /bi/ + /lif/), and 🐝🍃🍃 could be *believes.*

Proper names can also be written in such a way. If the symbol 🥖 is used to represent *rod* and the symbol 🚹 represents *man,* then 🥖🚹 could represent *Rodman,*



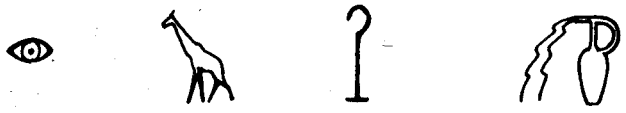
although nowadays the name is unrelated to either rods or men. Such combinations often become stylized or shortened so as to be more easily written. *Rodman,* for example, might be written in such a system as | ★ or even ⅄.

Jokes, riddles, and advertising make use of the rebus principle. A well-known ice-cream company advertises "31derful flavors."

This is not an efficient system because in many languages words cannot be divided into sequences of sounds that have meaning by themselves. It would be difficult, for example, to represent the word *English* (/iŋ/ + /glɪš/) in English according to the rebus principle. *Eng* by itself does not mean anything, nor does *glish.*

From Hieroglyphics to the Alphabet

At the time that Sumerian pictography was flourishing (around 4000 B.C.E.), a similar system was being used by the Egyptians, which the Greeks later called hieroglyphics (*hiero,* "sacred," + *glyphikos,* "carvings"). These sacred carvings originated as pictography as shown by the following:



"eye" "giraffe" "to rule"[2] "fresh" or "cool"[3]

Eventually, these pictograms came to represent both the concept and the word for the concept. Once this happened, hieroglyphics became a bona fide logographic writing system. Through the rebus principle, hieroglyphics also became a syllabic writing system.

The Phoenicians, a Semitic people who lived in what is today Lebanon, were aware of hieroglyphics as well as the offshoots of Sumerian writing. By 1500 B.C.E.. they had developed a writing system of twenty-two characters, the West Semitic Syllabary. Mostly, the characters stood for consonants alone. The reader provided the vowels, and hence the rest of the syllable, through knowledge of the language. (Cn y rd ths?) Thus the West Semitic Syllabary was both a **syllabary** and a **consonantal alphabet.**

The ancient Greeks tried to borrow the Phoenician writing system, but it was unsatisfactory as a syllabary because Greek has too complex a syllable structure. In Greek, unlike Phoenician, vowels cannot be determined by grammatical context, so a writing system for Greek required that vowels have their own independent representations. Fortuitously, Phoenician had more consonants than Greek, so when the Greeks borrowed the system they used the leftover symbols to represent vowel sounds. The result was **alphabetic writing,** a system in which both consonants and vowels are symbolized. (The word *alphabet* is derived from *alpha* and *beta,* the first two letters of the Greek alphabet.)

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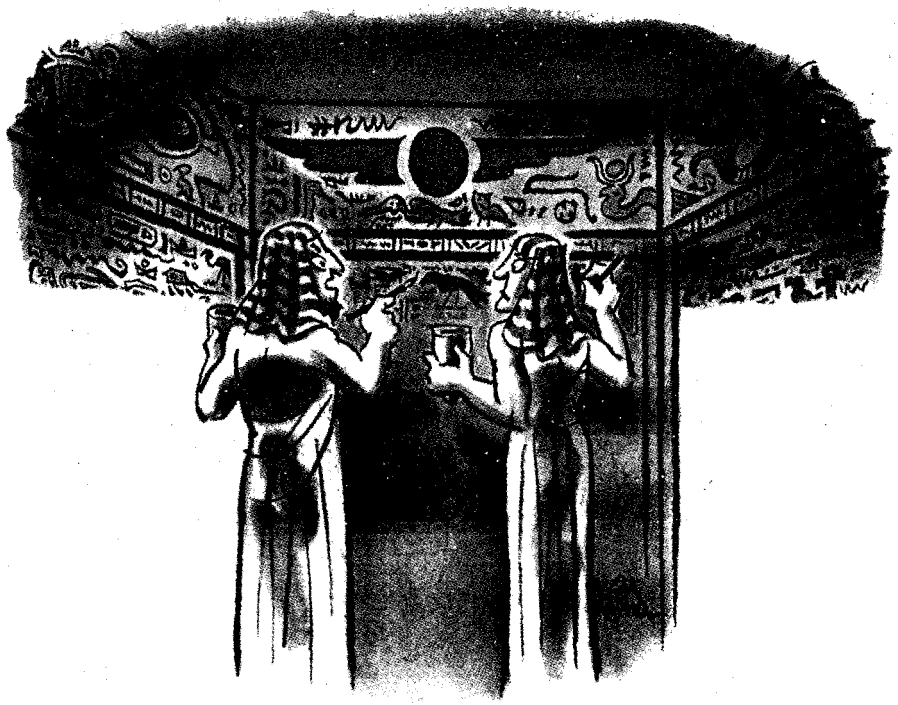
[2] The symbol portrays the Pharaoh's staff.

[3] Water trickling out of a vase.



"You'd better phrase that more politely. We no longer use the  *word."*

A majority of alphabetic systems in use today derive from the Greek system. The Etruscans knew this alphabet and through them it became known to the Romans, who used it for Latin. The alphabet spread with Western civilization, and eventually most nations of the world were exposed to, and had the option of using, alphabetic writing.

According to one view, the alphabet was not invented, it was discovered. If language did not include discrete individual sounds, no one could have invented alphabetic letters to represent such sounds. When humans started to use one symbol for one phoneme, they merely brought their intuitive knowledge of the language sound system to consciousness: They discovered what they already "knew." Furthermore, children (and adults) can learn an alphabetic system only if each separate sound has some psychological reality.

Modern Writing Systems

> . . . but their manner of writing is very peculiar, being neither from the left to the right, like the Europeans; nor from the right to the left, like the Arabians; nor from up to down, like the Chinese; nor from down to up, like the Cascagians, but aslant from one corner of the paper to the other, like ladies in England.
>
> Jonathan Swift, *Gulliver's Travels*

We have already mentioned the various types of writing systems used in the world: word or logographic writing, syllabic writing, consonantal alphabet writing, and alphabetic writing. Most of the world's written languages use alphabetic writing. Even Chinese and Japanese, whose native writing systems are not alphabetic, have adopted alphabetic transcription systems for special purposes such as communicating with foreigners, computers, and over the Internet.

Word Writing

In a word-writing, or logographic writing system, a written character represents both the meaning and pronunciation of each word or morpheme. Such systems are cumbersome, containing thousands of different characters. On the other hand, the editors of *Webster's Third New International Dictionary* claim more than 450,000 entries. All these words may be written using only twenty-six alphabetic symbols, a dot, a hyphen, an apostrophe, and a space. It is understandable why, historically, word writing gave way to alphabetic systems in most places in the world.

The major exceptions are the writing systems used in China and Japan. The Chinese writing system has an uninterrupted history that goes back more than thirty-five hundred years. For the most part it is a word-writing system, each character representing an individual word or morpheme. Longer words may be formed by combining two words or morphemes, as shown by the word meaning "business," măimai, which is formed by combining the words meaning "buy" and "sell." This is similar to compounding in English.

A word-writing system would be awkward for English and other Indo-European languages because of the pervasiveness of inflectional morphemes such as the *in-*, *im-*, and *iŋ-* of *intolerant, impossible,* and *incontinent,* inflected verb forms such as *take, takes, taken, took,* and *taking,* and inflected noun forms such as *cat, cats,* and *cat's.* These are difficult to represent without a huge proliferation of characters. Chinese, on the other hand, has little inflection.

Even without the need to represent inflectional forms, Chinese dictionaries contain tens of thousands of characters. A person need know "only" about five thousand, however, to read a newspaper. To promote literacy, the Chinese governments undertake character simplification programs from time to time. This process was first tried in 213 B.C.E., when the scholar Li Si published an official list of over three thousand characters whose written forms he had simplified by omitting unneeded strokes. This would be analogous to dictionary writers simplifying *amoeba* to *ameba,* eliminating the superfluous *o.*

Since that time successive generations of Chinese scholars have added new characters and modified old ones, creating redundancy, ambiguity, and complexity. Recent character-simplification efforts continue the ages old tradition of trying to make the system learnable and usable, while retaining its basic form.

The Chinese government has adopted a spelling system using the Roman alphabet, called **Pinyin,** which is now used for certain purposes along with the regular system of characters. Many city street signs are printed in both systems, which is helpful to foreign visitors. It is not the government's intent to replace the traditional writing, which is viewed as an integral part of Chinese culture. To the Chinese, writing is an art — **calligraphy** — and thousands of years of poetry, literature, and history are preserved in the old system.

An additional reason for keeping the traditional system is that it permits all literate Chinese to communicate even though their spoken languages are mutually unintelligible. Thus writing has served as a unifying factor throughout Chinese history, in an area where hundreds of languages and dialects coexist. A Chinese proverb states "people separated by a blade of grass cannot understand each other." The unified writing system is a scythe that cuts across linguistic differences and allows the people to communicate.

This use of written Chinese characters is similar to the use of Arabic numerals, which mean the same in many countries. The character 5, for example, stands for a different sequence of sounds in English, French, and Finnish. In English it is *five* /fajv/, in French it is *cinq* /sæ̃k/, and in Finnish *viisi* /vi:si/, but in all these languages, 5, whatever its phonological form, means "five." Similarly, the spoken word for "rice" is different in the various Chinese languages, but the written character is the same. If the writing system in China were to become alphabetic, each language would be as different in writing as in speaking, and written communication would no longer be possible among the various language communities.

Syllabic Writing

Syllabic writing systems are more efficient than word-writing systems, and they are certainly less taxing on the memory. However, languages with a rich structure of syllables containing many consonant clusters (such as *tr* or *spl*) cannot be efficiently written with a syllabary. To see this difficulty, consider the syllable structures of English.

I	/aj/	V	ant	/ænt/	VCC
key	/ki/	CV	pant	/pænt/	CVCC
ski	/ski/	CCV	stump	/stʌmp/	CCVCC
spree	/spri/	CCCV	striped	/strajpt/	CCCVCC
an	/æn/	VC	ants	/ænts/	VCCC
seek	/sik/	CVC	pants	/pænts/	CVCCC
speak	/spik/	CCVC	sports	/spɔrts/	CCVCCC
scram	/skræm/	CCCVC	splints	/splɪnts/	CCCVCCC

Even this table is not exhaustive; there are syllables whose codas may contain four consonants such as *strengths* /strɛnkθs/ and *triumphs* /trajəmpfs/. With more than thirty

consonants and over twelve vowels, the number of different possible syllables is astronomical, which is why English, and Indo-European languages in general, are unsuitable for syllabic writing systems.

The Japanese language, on the other hand, is more suited for syllabic writing, because all words in Japanese can be phonologically represented by about one hundred syllables, mostly of the consonant-vowel (CV) type, and there are no underlying consonant clusters. To write these syllables the Japanese have two syllabaries, each containing forty-six characters, called **kana.** The entire Japanese language can be written using kana. One syllabary, **katakana,** is used for loan words and for special effects similar to italics in European writing. The other syllabary, **hiragana,** is used for native words. Hiragana characters may occur in the same word as ideographic characters, which are called **kanji,** and are borrowed Chinese characters. Thus Japanese writing is part word writing, part syllable writing.

During the first millennium, the Japanese tried to use Chinese characters to write their language. However, spoken Japanese is unlike spoken Chinese. (They are genetically unrelated languages.) A word-writing system alone was not suitable for Japanese, which is a highly inflected language in which verbs may occur in thirty or more different forms. Scholars devised syllabic characters, based on modified Chinese characters, to represent the inflectional endings and other grammatical morphemes. Thus, in Japanese writing, kanji is commonly used for the verb roots, and hiragana symbols for the inflectional markings.

For example, 行 is the character meaning "go," pronounced [i]. The word for "went" in formal speech is *ikimashita,* written 行きました, where the hiragana symbols きました represent the syllables *ki, ma, shi, ta.* Nouns, on the other hand, are not inflected in Japanese, and they can generally be written using Chinese characters alone.

In theory, all of Japanese could be written in hiragana. However in Japanese there are many homographs (like *lead* in "lead pipe" or "lead astray"), and the use of kanji disambiguates a word that might be ambiguous if written syllabically, similar to the ambiguity of *can* in "He saw that gasoline can explode." In addition, kanji writing is an integral part of Japanese culture, and it is unlikely to be abandoned.

In America in 1821, the Cherokee Sequoyah invented a syllabic writing system for his native language. Sequoyah's script, which survives today essentially unchanged, proved useful to the Cherokee people and is justifiably a point of great pride for them. The syllabary contains eighty-five symbols, many of them derived from Latin characters, which efficiently transcribe spoken Cherokee. A few symbols are shown here:

gu

hu

we

ta

mi

In some languages, an alphabetic character can be used in certain words to write a syllable. In a word such as bar-b-q, the single letters represent syllables (*b* for [bi] or [bə], *q* for [kju]).

Consonantal Alphabet Writing

Semitic languages, such as Hebrew and Arabic, are written with alphabets that consist only of consonants. Such an alphabet works for these languages because consonants form the root of most words. For example, the consonants *ktb* in Arabic form the root of words associated with "write." Thus *katab* means "to write," *aktib* means "I write," *kitab* means "a book," and so on. Inflectional and derivational processes can be expressed by different vowels inserted into the triconsonantal roots.

Because of this structure, vowels can sometimes be figured out by a person who knows the spoken language, jst lk y cn rd ths phrs, prvdng y knw nglsh. English, however, is unrelated to the Semitic languages, and its structure is such that vowels are usually crucial for reading and writing. The English phrase *I like to eat out* would be incomprehensible without vowels, viz. *lk t t t.*

Semitic alphabets provide a way to use diacritic marks to express vowels. This is partly out of the desire to preserve the true pronunciations of religious writings, and partly out of deference to children and foreigners learning to read and write. In Hebrew, dots or other small figures are placed under, above, or even in the center of the consonantal letter to indicate the accompanying vowel. For example, לְ represents an l-sound in Hebrew writing. Unadorned, the vowel that follows would be determined by context. However, לֶ indicates that the vowel that follows is [ɛ], so in effect לֶ represents the syllable [lɛ].

These systems are called consonantal alphabets because only the consonants are fully developed symbols. Sometimes they are considered syllabaries because once the reader or writer perceives the vowel, the consonantal letter *seems* to stand for a syllable. With a true syllabary, however, a person need know only the phonetic value of each symbol to pronounce it correctly and unambiguously. Once you learn a Japanese syllabary, you can read Japanese in a (more or less) phonetically correct way without any idea of what you are saying. (The syllabic text doesn't always show word boundaries, and there is no indication of prosodic features such as intonation.) This would be impossible for Arabic or Hebrew.

Alphabetic Writing

Alphabetic writing systems are easy to learn, convenient to use, and maximally efficient for transcribing any human language.

The term **sound writing** is sometimes used in place of *alphabetic writing,* but it does not truly represent the principle involved in the use of alphabets. One-sound ↔ one-letter is inefficient and unintuitive, because we do not need to represent the [p^h] in *pit* and the [p] in *spit* by two different letters. It is confusing to represent nonphonemic differences in writing because the sounds are seldom perceptible to speakers. Except for the phonetic alphabets, whose function is to record the sounds of all languages for descriptive purposes, most, if not all, alphabets have been devised on the **phonemic principle.**

In the twelfth century, an Icelandic scholar developed an orthography derived from the Latin alphabet for the writing of the Icelandic language of his day. Other scholars in this period were also interested in orthographic reform, but the Icelander, who came to be known as "the First Grammarian" (because his anonymous paper was the first entry in a collection of grammatical essays), was the only one of the time who left a record of his principles. The orthography he developed was clearly based on the phonemic principle. He used minimal pairs to show the distinctive contrasts. He did not suggest different symbols for voiced and unvoiced [θ] and [ð], nor for [f] or [v], nor for velar [k] and palatal [č], because these pairs, according to him, represented allophones of the phonemes /θ/, /f/, and /k/, respectively. He did not use these modern technical terms, but the letters of this alphabet represent the distinctive phonemes of Icelandic of that century.

King Seijong of Korea (1397–1450) realized that the same principles held true for Korean when, with the assistance of scholars, he designed a phonemic alphabet. The king was an avid reader and realized that the over thirty thousand Chinese characters used to write Korean discouraged literacy. The fruit of the king's labor was the Korean alphabet called **Hangul,** which had seventeen consonants and eleven vowels.

The Hangul alphabet was designed on the phonemic principle. Although Korean has the sounds [l] and [r], Seijong represented them by a single letter because they are allophonic variants of the same phoneme. (See exercise 3, chapter 7.) The same is true for the sounds [s] and [š], and [ts] and [tš].

Seijong showed further ingenuity in the design of the characters themselves. The consonants are drawn so as to depict the place and manner of articulation. Thus the letter for /g/ is ㄱ to suggest the raising of the back of the tongue to the velum. The letter for /m/ is the closed figure ㅁ to suggest the closing of the lips. Vowels are drawn as long vertical or horizontal lines, sometimes with smaller marks attached to them. Thus ㅣ represent /i/, ㅜ represents /u/, and ㅏ represents /a/. They are easily distinguishable from the blockier consonants.

In Korean writing, the Hangul characters are grouped into squarish blocks, each corresponding to a syllable. The syllabic blocks, though they consist of alphabetic characters, make Korean look as if it were written in a syllabary. If English were written that way, "Now is the winter of our discontent" would have this appearance:

No	i	th	wi	te	o	ou	di	co	te	
w	s	e	n	r	f	r	s	n	nt	

The space between letters is less than the space between syllables, which is less than the space between words. An example of Korean writing can be found in exercise 9, item 10 at the end of the chapter.

These characteristics make Korean writing unique in the world, unlike that of the Europeans, the Arabians, the Chinese, the Cascagians, or even "ladies in England."

Many languages have their own alphabet, and each has developed certain conventions for converting strings of alphabetic characters into sequences of sound (reading), and converting sequences of sounds into strings of alphabetic characters (writing). As we have illustrated with English, Icelandic, and Korean, the rules governing the sound system of the language play an important role in the relation between sound and character.

Most European alphabets use Latin (Roman) letters, adding diacritic marks to accommodate individual characteristics of a particular language. For example, Spanish uses /ñ/ to represent the palatalized nasal phoneme of *señor,* and German has added an umlaut for certain of its vowel sounds that did not exist in Latin (for example, in über). Diacritic marks supplement the forty-six kana of the Japanese syllabaries to enable them to represent the one hundred-plus syllables of the language. Diacritic marks are also used in writing systems of tone languages such as Thai to indicate the tone of a syllable.

Some languages use two letters together — called a **digraph** — to represent a single sound. English has many digraphs, such as *sh* /š/ as in *she, ch* /č/ as in *chop, ng* as in *sing* (/siŋ/), and *oa* as in *loaf* /lof/.

Besides the European languages, languages such as Turkish, Indonesian, Swahili, and Vietnamese have adopted the Latin alphabet. Other languages that have more recently developed a writing system use some of the IPA phonetic symbols in their alphabet. Twi, for example, uses ɔ, ɛ, and ŋ.

Many Slavic languages including Russian use the Cyrillic alphabet, named for St. Cyril. It is derived directly from the Greek alphabet without Latin mediation.

Many contemporary alphabets, such as those used for Arabic, Farsi (spoken in Iran), Urdu (spoken in Pakistan), and many languages of the Indian subcontinent including Hindi, are ultimately derived from the ancient Semitic syllabaries.

Figure 12.2 shows a coarse time line of the development of the Roman alphabet.

15000 B.C.E. — Cave drawings as pictograms

.

.

.

4000 B.C.E. — Sumerian cuneiform

3000 B.C.E. — Hieroglyphics

1500 B.C.E. — West Semitic Syllabary of the Phoenicians

1000 B.C.E. — Ancient Greeks borrow the Phoenician consonantal alphabet
750 B.C.E. — Etruscans borrow the Greek alphabet
500 B.C.E. — Romans adapt the Etruscan/Greco alphabet to Latin

Figure 12.2 Time line of the development of the Roman alphabet.

Reading, Writing, and Speech

> . . . Ther is so great diversite
> In English, and in wryting of oure tonge,
> So prey I god that non myswrite thee . . .
>
> Geoffrey Chaucer, *Troilus and Cressida*

The development of writing freed us from the limitations of time and geography, but spoken language still has primacy, and is the principle concern of most linguists. Nevertheless, writing systems are of interest for their own sake.

The written language reflects, to a certain extent, the elements and rules that together constitute the grammar of the language. The letters of the alphabet represent the system of phonemes, although not necessarily in a direct way. The independence of words is revealed by the spaces between them in most writing systems. Japanese and Thai do not require spaces between words, although speakers and writers are aware of the individual words. On the other hand, no writing system shows the individual morphemes within a word in this way, even though speakers know what they are.

Many languages use punctuation, including capitalization, to indicate sentences, phrases, questions, intonation, stress, and contrast, but the written forms of other languages do not make use of punctuation.

Consider the difference in meaning between (1) and (2):

1. The Greeks, who were philosophers, loved to talk a lot.
2. The Greeks who were philosophers loved to talk a lot.

The relative clause in (1), set off by commas, is nonrestrictive because it means that all the Greeks were philosophers. It may be paraphrased as (1′):

1′. The Greeks were philosophers, and they loved to talk a lot.

The meaning of the second sentence, without the commas, can be paraphrased as:

2′. Among the Greeks, it was the philosophers who loved to talk a lot.

Similarly, by using an exclamation point or a question mark, the intention of the writer can be made clearer.

3. The children are going to bed at eight o'clock. (a simple statement)
4. The children are going to bed at eight o'clock! (an order)
5. The children are going to bed at eight o'clock? (a question)

These punctuation marks reflect the pauses and the intonations that would be used in the spoken language.

In sentence 6 *he* can refer to either John or someone else, but in sentence 7 the pronoun must refer to someone other than John:

6. John said he's going.
7. John said, "He's going."

The apostrophe used in contractions and possessives also provides syntactic information not always available in the spoken utterance.

8. My cousin's friends (one cousin)
9. My cousins' friends (two or more cousins)

Writing, then, somewhat reflects the spoken language, and punctuation may even distinguish between two meanings not revealed in the spoken forms, as shown in sentences 8 and 9.

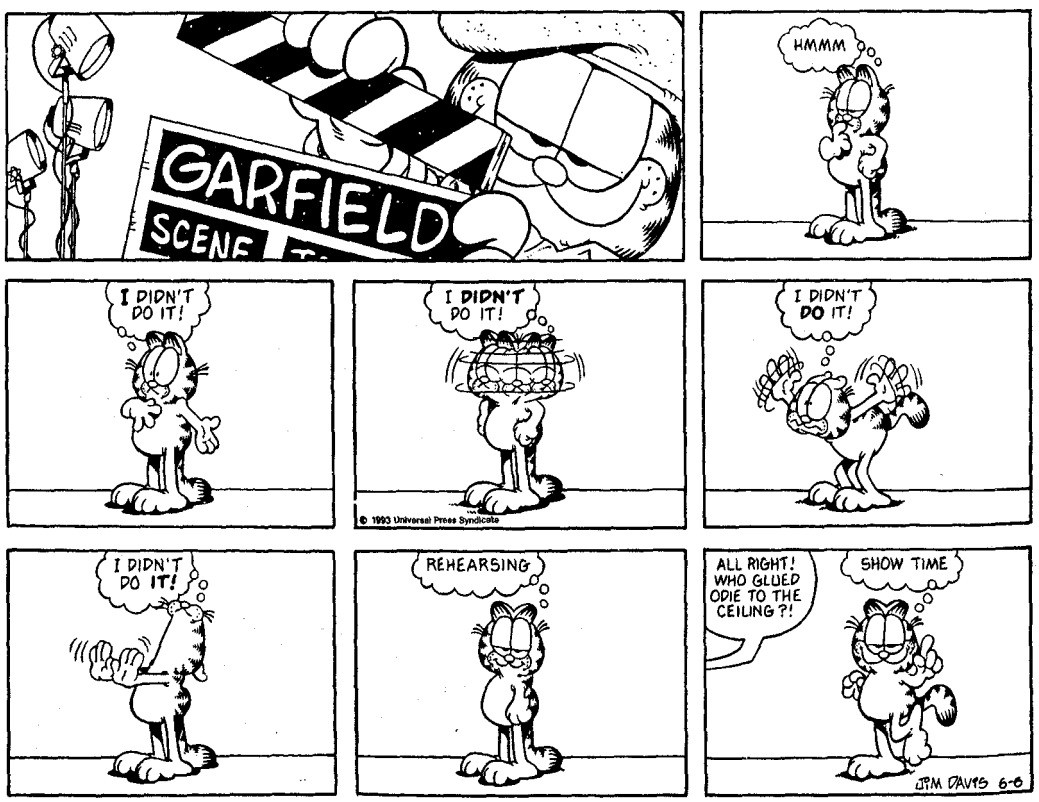
In the normal written version of sentence 10,

10. John whispered the message to Bill and then he whispered it to Mary

he can refer to either John or Bill. In the spoken sentence, if *he* receives extra stress (called **contrastive stress**), it must refer to Bill; if *he* receives normal stress, it refers to John.

A speaker can usually emphasize any word in a sentence by using contrastive stress. Writers sometimes attempt to show emphasis by using all capital letters, italics, or underlining the emphasized word. This is nicely illustrated by the Garfield cartoon below.

In the first panel we understand Garfield as meaning, "I didn't do it, someone else did." In the second panel the meaning is "I didn't do it, even though you think I did." In the third, the contrastive stress conveys the meaning "I didn't do it, it just happened



somehow." In the fourth panel Garfield means, "I didn't do it, though I may be guilty of other things." In each case the boldfaced word is contrasted with something else.

Although such visual devices can help in English, it is not clear that they can be used in a language such as Chinese. In Japanese, however, this kind of emphasis can be achieved by writing a word in katakana.

The use of italics has many functions in written language. One use is to indicate reference to the italicized word itself, as in "*the dog* is a noun article." A children's riddle, which is sung aloud, plays on this distinction:

> Railroad crossing, watch out for cars
> How do you spell it without any *r*'s?

The answer is "i-t." The joke is that the second line, were it written, would be:

> How do you spell *it* without any *r*'s?

Written language is more conservative than spoken language. When we write we are more apt to obey the prescriptive rules taught in school than when we speak. We may write "it is I" but we say "it's me." Such informalities abound in spoken language, but may be "corrected" by copy editors, diligent English teachers, and careful writers. A linguist wishing to describe the language that people regularly use therefore cannot depend on written records alone.

Reading

Children learn to speak instinctively without being taught. Learning to read and write is not like learning to speak. Recently, however, the Whole Language approach to reading has suggested that children can learn to read just as they learn to talk, through "constant interaction with family and friends, teachers and classmates." This view is given in a National Council of Teachers of English brochure that appears on the World Wide Web. It opposes the view that children be taught to segment speech into individual sounds and relate these sounds to the letters of the alphabet, which is sometimes referred to as *teaching phonics.*

As we have seen in this chapter, most written languages are based on oral language. The Whole Language advocates do not understand the way that children acquire language. They deny the fact that the ability to learn language is an innate, biologically determined aspect of the human brain, whereas reading and writing are not. Otherwise, one would not find so many people who speak so many languages that have no written form.

Many studies have shown that deaf children who have fully acquired a sign language have difficulty learning to read. This is understandable since the alphabetic principle in a system like English requires an understanding of sound-symbol regularities. Hearing children should therefore not be deprived of the advantage they would have if their unconscious knowledge of phonemes is made conscious.

In developing teaching methods for reading and writing, it is important to understand the interactions of speech, reading, and writing. Whatever methods are adopted, however, it should take advantage of the child's innate linguistic knowledge, and include helping the child relate sounds to letters.

Spelling

"Do you spell it with a 'v' or a 'w'?" inquired the judge.
"That depends upon the taste and fancy of the speller, my Lord," replied Sam.

Charles Dickens, *The Pickwick Papers*

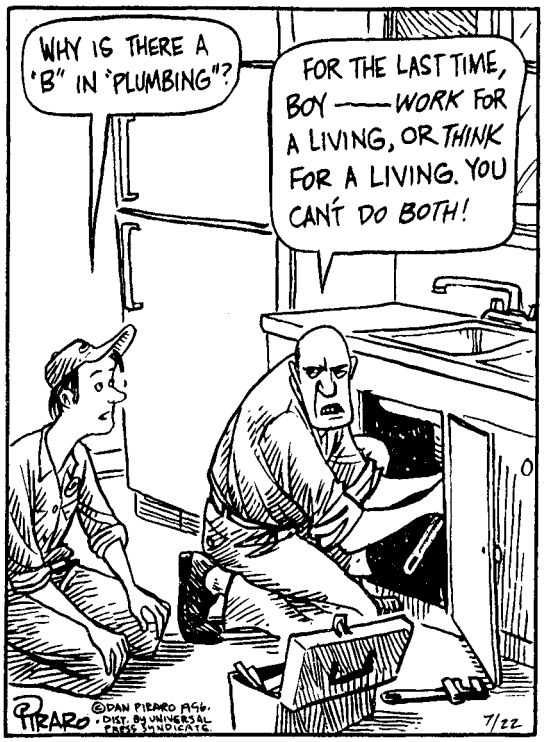
If writing represented the spoken language perfectly, spelling reforms would never have arisen. In chapter 6 we discussed some of the problems in the English orthographic system. These problems prompted George Bernard Shaw to write:

> . . . It was as a reading and writing animal that Man achieved his human eminence above those who are called beasts. Well, it is I and my like who have to do the writing. I have done it professionally for the last sixty years as well as it can be done with a hopelessly inadequate alphabet devised centuries before the English language existed to record another and very different language. Even this alphabet is reduced to absurdity by a foolish orthography based on the notion that the business of spelling is to represent the origin and history of a word instead of its sound and meaning. Thus an intelligent child who is bidden to spell *debt*, and very properly spells it *d-e-t*, is caned for not spelling it with a *b* because Julius Caesar spelt the Latin word for it with a *b*.[4]

The irregularities between graphemes (letters) and phonemes have been cited as one reason "why Johnny can't read. "Homographs such as *lead* /lid/ and *lead* /led/ have fueled the flames of spelling reform movements. Different spellings for the same sound, silent letters, and missing letters also are cited as reasons that English needs a new orthographic system. The following examples illustrate the discrepancies between spelling and sounds in English:

Same Sound, Different Spelling	**Different Sound, Same Spelling**		**Silent Letters**	**Missing Letters**
/aj/	**th**ought	/θ/	lis**t**en	use/**j**uz/
	though	/ð/	de**b**t	fuse/fjuz/
aye	**Th**omas	/t/	**g**nome	
buy			**k**now	
by	**a**te	/e/	**p**sychology	
die	**a**t	/æ/	**r**ight	
hi	f**a**ther	/a/	**m**nemonic	
Th**ai**	m**a**ny	/ɛ/	s**c**ience	
h**ei**ght			ta**l**k	
g**ui**de			**h**onest	
			s**w**ord	
			bom**b**	
			c**l**ue	
			Wednesday	

[4] G. B. Shaw. 1948. Preface to R. A. Wilson, *The Miraculous Birth of Language,* New York: Philosophical Library.



The spelling of most English words today is based on English as spoken in the fourteenth, fifteenth, and sixteenth centuries. Spellers in those times saw no need to spell the same word consistently. Shakespeare spelled his own name in several ways. In his plays, he spelled the first person singular pronoun variously as *I, ay,* and *aye.*

When the printing press was introduced in the fifteenth century, archaic and idiosyncratic spellings became widespread and more permanent. Words in print were frequently misspelled outright because many of the early printers were not native speakers of English.

Spelling reformers saw the need for consistent spelling that correctly reflected the pronunciation of words. To that extent, spelling reform was necessary. But many scholars became overzealous. Because of their reverence for Classical Greek and Latin, these scholars changed the spelling of English words to conform to their etymologies. Where Latin had a *b,* they added a *b* even if it was not pronounced. Where the original spelling had a *c* or *p* or *h,* these letters were added, as shown by these few examples:

Middle English Spelling		Reformed Spelling
indite	→	indict
dette	→	debt
receit	→	receipt
oure	→	hour

Such spelling habits inspired Robert N. Feinstein to compose the following poem, entitled *Gnormal Pspelling:*[5]

Gnus and gnomes and gnats and such —
Gnouns with just one G too much.
Pseudonym and psychedelic —
P becomes a psurplus relic.
Knit and knack and knife and knocked —
Kneedless Ks are overstocked.
Rhubarb, rhetoric and rhyme
Should lose an H from thyme to time.

Even today spelling reform is an issue. Advertisers often spell *though* as *tho, through* as *thru,* and *night* as *nite.* The *Chicago Tribune* once used such spellings, but it gave up the practice in 1975. Spelling habits are hard to change, and many people regard revised spelling as substandard.

The current English spelling system is based primarily on the earlier pronunciations of words. The many changes that have occurred in the sound system of English since then are not reflected in the current spelling, which was frozen due to widespread printed material and scholastic conservatism.

For these reasons, modern English orthography does not always represent what we know about the phonology of the language. The disadvantage is partially offset by the fact that the writing system allows us to read and understand what people wrote hundreds of years ago without the need for translations. If there were a one-to-one correspondence between our spelling and the sounds of our language, we would have difficulty reading the *U.S. Constitution* or the *Declaration of Independence,* let alone the works of Shakespeare and Dickens.

Languages change. It is not possible to maintain a perfect correspondence between pronunciation and spelling, nor is it 100 percent desirable. For instance, in the case of homophones, it is helpful at times to have different spellings for the same sounds, as in the following pair:

The book was red. The book was read.

Lewis Carroll makes the point with humor:

"And how many hours a day did you do lessons?" said Alice.

"Ten hours the first day," said the Mock Turtle, "nine the next, and so on."

"What a curious plan!" exclaimed Alice.

"That's the reason they're called lessons," the Gryphon remarked, "because they lessen from day to day."

There are also reasons for using the same spelling for different pronunciations. A morpheme may be pronounced differently when it occurs in different contexts. The

[5] "Gnormal Pspelling" by Robert N. Feinstein from *National Forum: The Phi Kappa Phi Journal,* Summer, 1986. Reprinted with permission.

identical spelling reflects the fact that the different pronunciations represent the same morpheme. This is the case with the plural morpheme. It is always spelled with an *s* despite being pronounced [s] in *cats* and [z] in *dogs*. The sound of the morpheme is determined by rules, in this case and elsewhere.

Similarly, the phonetic realizations of the vowels in the following forms follow a regular pattern:

aj/ɪ	i/ɛ	e/æ
divine/divinity	serene/serenity	sane/sanity
sublime/sublimate	obscene/obscenity	profane/profanity
sign/signature	hygiene/hygienic	humane/humanity

These considerations have led some scholars to suggest that in addition to being phonemic, English has a **morphophonemic orthography.** To read English correctly morphophonemic knowledge is required. This contrasts with a language such as Spanish, whose orthography is almost purely phonemic.

Other examples provide further motivation for spelling irregularities. The *b* in "*debt*" may remind us of the related word *debit,* in which the *b* is pronounced. The same principle is true of pairs such as *sign/signal, bomb/bombardier,* and *gnosis/ prognosis/ agnostic.*

There are also different spellings that represent the different pronunciations of a morpheme when confusion would arise from using the same spelling. For example, there is a rule in English phonology that changes a /t/ to an /s/ in certain cases:

democrat → democracy

The different spellings are due in part to the fact that this rule does not apply to all morphemes, so that *art* + *y* is *arty,* not **arcy.* Regular phoneme-to-grapheme rules determine in many cases when a morpheme is to be spelled identically and when it is to be changed.

Other subregularities are apparent. A *c* always represents the /s/ sound when it is followed by a *y, i,* or *e,* as in *cynic, citizen,* and *censure.* Because it is always pronounced [k] when it is the final letter in a word or when it is followed by any other vowel (*coat, cat, cut,* and so on), no confusion results. The *th* spelling is usually pronounced voiced [ð] between vowels (the result of an historical intervocalic voicing rule), and in function words such as *the, they, this,* and *there.* Elsewhere it is the voiceless [θ].

There is another important reason why spelling should not always be tied to the phonetic pronunciation of words. Different dialects of English have divergent pronunciations. Cockneys drop their "(h)aitches" and Bostonians and southerners drop their *r*'s; *neither* is pronounced [niðər], [najðər], and [niðə] by Americans, [najðə] by the British, and [neðər] by the Irish; some Scots pronounce *night* [nɪxt]; people say "Chicago" and "Chicawgo," "hog" and "hawg," "bird" and "boyd"; *four* is pronounced [f:ɔ] by the British, [fɔr] in the Midwest, and [foə] in the South; *orange* is pronounced in at least two ways in the United States: [arənǰ] and [ɔrənǰ].

While dialectal pronunciations differ, the common spellings indicate the intended word. It is necessary for the written language to transcend local dialects. With a uniform spelling system, a native of Atlanta and a native of Glasgow can communicate through

writing. If each dialect were spelled according to its pronunciation, written communication among the English-speaking peoples of the world would suffer.

Spelling Pronunciations

> For pronunciation, the best general rule is to consider those as the most elegant speakers who deviate least from written words.
>
> Samuel Johnson (1755)

Despite the primacy of the spoken over the written language, the written word is often regarded with excessive reverence. The stability, permanency, and graphic nature of writing cause some people to favor it over ephemeral and elusive speech. Humpty Dumpty expressed a rather typical attitude: "I'd rather see that done on paper."

Writing has affected speech only marginally, however, most notably in the phenomenon of **spelling pronunciation.** Since the sixteenth century, we find that spelling has to some extent influenced standard pronunciation. The most important of such changes stem from the eighteenth century under the influence and decrees of the dictionary-makers and the schoolteachers. The struggle between those who demanded that words be pronounced according to the spelling, and those who demanded that words be spelled according to their pronunciation, generated great heat in that century. The preferred pronunciations were given in the many dictionaries printed in the eighteenth century, and the "supreme authority" of the dictionaries influenced pronunciation in this way.

Spelling also has influenced pronunciation of words that are infrequently used in normal daily speech. In many words that were spelled with an initial *h,* the *h* was silent as recently as the eighteenth century. Then, no [h] was pronounced in *honest, hour, habit, heretic, hotel, hospital,* and *herb.* Common words like *honest* and *hour* continued *h*-less, despite the spelling. The other less frequently used words were given a "spelling pronunciation," and the *h* is sounded today. *Herb* is currently undergoing this change. In British English the *h* is pronounced, whereas in American English it generally is not.

Similarly, the *th* in the spelling of many words was once pronounced like the /t/ in *Thomas.* Later most of these words underwent a change in pronunciation from /t/ to /θ/, as in *anthem, author,* and *theater.* Nicknames may reflect the earlier pronunciations: "Ka*t*e" for "Ca*th*erine," "Be*tt*y" for "Elizabe*th*," "Ar*t*" for "Ar*th*ur." *Often* is often pronounced with the *t* sounded, though historically it is silent, and up-to-date dictionaries now indicate this pronunciation as an alternative.

The clear influence of spelling on pronunciation is observable in the way place-names are pronounced. *Berkeley* is pronounced [bɹrkli] in California, although it stems from the British [ba:kli]; *Worcester* [wʊstər] or [wʊstə] in Massachusetts is often pronounced [wɹrčɛstər] in other parts of the country. *Salmon* is pronounced [sæmən] in most parts of the United States, but many southern speakers pronounce the [l] and say [sælmən].

Although the written language has some influence on the spoken, it does not change the basic system—the grammar—of the language. The writing system, conversely, reflects, in a more or less direct way, the grammar that every speaker knows.

Summary

Writing is a basic tool of civilization. Without it, the world as we know it could not exist.

The precursor of writing was "picture writing," which used **pictograms** to represent objects directly and literally. Pictograms are called **ideograms** when the drawing becomes less literal, and the meaning extends to concepts associated with the object originally pictured. When ideograms become associated with the words for the concepts they signify, they are called **logograms.** Logographic systems are true writing systems in the sense that the symbols stand for words of a language.

The Sumerians first developed a pictographic writing system to keep track of commercial transactions. It was later expanded for other uses and eventually evolved into the highly stylized (and stylus-ized) **cuneiform writing.** Cuneiform was generalized to other writing systems by application of the **rebus principle,** which uses the symbol of one word or syllable to represent another word or syllable pronounced the same.

The Egyptians also developed a pictographic system known as **hieroglyphics.** This system influenced many peoples, including the Phoenicians, who developed the West Semitic Syllabary. The Greeks borrowed the Phoenician system, and in adapting it to their own language they used the symbols to represent both consonant and vowel sound segments, thus inventing the first alphabet.

There are four types of writing systems: **logographic** (word writing), where every symbol or character represents a word or morpheme (as in Chinese); **syllabic,** where each symbol represents a syllable (as in Japanese); **consonantal alphabetic,** where each symbol represents a consonant and vowels may be represented by diacritical marks (as in Hebrew); and **alphabetic,** where each symbol represents (for the most part) a vowel or consonant (as in English).

The writing system may have some small effect on the spoken language. Languages change in time, but writing systems tend to be more conservative. Thus spelling no longer accurately reflects pronunciation. Also, when the spoken and written forms of the language become divergent, some words may be pronounced as they are spelled, sometimes due to the efforts of pronunciation reformers.

There are advantages to a conservative spelling system. A common spelling permits speakers whose dialects have diverged to communicate through writing, as is best exemplified in China, where the "dialects" are mutually unintelligible. We are also able to read and understand the language as it was written centuries ago. In addition, despite a certain lack of correspondences between sound and spelling, the spelling often reflects speakers' morphological and phonological knowledge.

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Exercises

1. **A.** "Write" the following words and phrases, using pictograms that you invent:
   - **a.** eye
   - **b.** a boy
   - **c.** two boys
   - **d.** library
   - **e.** tree
   - **f.** forest
   - **g.** war
   - **h.** honesty
   - **i.** ugly
   - **j.** run
   - **k.** Scotch tape
   - **l.** smoke

   B. Which words are most difficult to symbolize in this way? Why?

   C. How does the following sentence reveal the problems in pictographic writing? "A grammar represents the unconscious, internalized linguistic competence of a native speaker."

2. A *rebus* is a written representation of words or syllables that uses pictures of objects whose names resemble the sounds of the intended words or syllables. For example,  might be the symbol for "eye" or "I" or the first syllable in "idea."

   A. Using the rebus principle, "write" the following words:
   - **a.** tearing
   - **b.** icicle
   - **c.** bareback
   - **d.** cookies

   B. Why would such a system be a difficult system in which to represent all words in English? Illustrate with an example.

3. **A.** Construct non-Roman alphabetic letters to replace the letters used to represent the following sounds in English:

   t r s k w č i æ f n

B. Use these symbols plus the regular alphabet symbols for the other sounds to write the following words in your "new orthography."

a. character

b. guest

c. cough

d. photo

e. cheat

f. rang

g. psychotic

h. tree

4. Suppose the English writing system were a *syllabic* system instead of an *alphabetic* system. Use capital letters to symbolize the necessary syllabic units for the following words, and list your "syllabary." *Example:* Given the words *mate, inmate, intake,* and *elfin,* you might use: A = mate, B = in, C = take, and D = elf. In addition, write the words using your syllabary. *Example: inmate* — BA; *elfin* — DB; *intake* — BC; *mate* — A. (Do not use more syllable symbols than you absolutely need.)

a. childishness

b. childlike

c. Jesuit

d. lifelessness

e. likely

f. zoo

g. witness

h. lethal

i. jealous

j. witless

k. lesson

5. In the following pairs of English words the bold-faced portions are pronounced the same but spelled differently. Can you think of any reason why the spelling should remain distinct? (*Hint: Reel* and *real* are pronounced the same, but *reality* shows the presence of a phonemic /æ/ in *real.*)

	A	B	Reason
a.	I **am**	i**amb**	
b.	goose	produce	
c.	fa**shion**	complication	
d.	Newt**on**	org**an**	
e.	**no**	**kn**ow	
f.	**hymn**	**him**	

6. In the following pairs of words the bold-faced portions are spelled the same but pronounced differently. Try to state some reasons why the spelling of the words in column B should not be changed.

A	B	Reason
a. mingle	long	The *g* is pronounced in *longer.*
b. line	children	
c. sonar	resound	
d. cent	mystic	
e. crumble	bomb	
f. cats	dogs	
g. stagnant	design	
h. serene	obscenity	

7. Each of the following sentences is ambiguous in the written form. How can these sentences be made unambiguous when they are spoken?

Example: John hugged Bill and then he kissed him.

For the meaning "John hugged and kissed Bill," use normal stress (*kissed* receives stress). For the meaning "Bill kissed John," contrastive stress is needed on both *he* and *him.*

a. What are we having for dinner, Mother?

b. She's a German language teacher.

c. They formed a student grievance committee.

d. Charles kissed his wife and George kissed his wife too.

8. In the written form, the following sentences are not ambiguous, but they would be if spoken. State the devices used in writing that make the meanings explicit.

a. They're my brothers' keepers.

b. He said, "He will take the garbage out."

c. The red book was read.

d. The flower was on the table.

9. Match the ten samples of writing and the ten languages. There are enough hints in this chapter to get most of them. (The source of these examples, and many others, is *Languages of the World* by Kenneth Katzner, 1975, New York: Funk & Wagnalls.)

a. ____ Cherokee	**1.** 仮に勝手に変えるようなことをすれば,
b. ____ Chinese	**2.** Κι ὁ νοῦς του ἀγκάλιασε πονετικὰ τὴν Κρήτη.
c. ____ German (Gothic style)	**3.** «Что это? я падаю? у меня ноги подкашиваются»,
d. ____ Greek	**4.** וְהָיָה ׀ בְּאַחֲרִית הַיָּמִים נָכוֹן יִהְיֶה הַר
e. ____ Hebrew	**5.** Saá sàre yi bèŋ atɛkyé bí â mpɔ̀torɔ áhyɛ́
f. ____ Icelandic	**6.** 既然必须和新的群众的时代相结合.
g. ____ Japanese	**7.** ᎫᏰᏡ ᎠᏍ ᎫᏰᎾᏮ ᏣᎳᎩ ᏣᎾᏗᏉ.
h. ____ Korean	**8.** Þótt þú langförull legðir sérhvert land undir fót,
i. ____ Russian	**9.** Pharao's Anblick war wunderbar.
j. ____ Twi	**10.** 스위스는 독특한 체제

10. The following appeared on the safety card of a Spanish airline. Identify each language. (You will probably have to spend some time in the library and/or visit various departments of foreign languages.)

1. Para su seguridad
2. For your safety
3. Pour votre sécurité
4. Für ihre Sicherheit
5. Per la Vostra sicurezza
6. Para sua segurança
7. あなたの安全のために
8. Для Вашей безопасности
9. Dla bezpieczeństwa pasażerów
10. Za vašu sigurnost
11. Για την ασφάλειά σας
12. Kendi emniyetiniz için
13. من أجل سلامتك

11. Diderot and D'Alembert, the French "Encyclopedists," wrote:

> The Chinese have no alphabet; their very language is incompatible with one, since it is made up of an extremely limited number of sounds. It would be impossible to convey the sound of Chinese through our alphabet or any other alphabet.

Comment on this.

12. Here are several emoticons. See if you can assign a meaning to each one. There is no one correct answer because they haven't been in the language long enough to become conventionalized. One possible set of answers is printed upside down in the footnote.[6]

a. >:–(

b. :–#

c. 8:--(

d. :D

e. :-(o)

f. :–(O)

g. |–)

h. :/)

[6] **a.** Annoyance. **b.** My lips are sealed. **c.** Condescension **d.** Ha, ha. **e.** Surprise. **f.** I'm yelling. **g.** See no evil. **h.** Not that funny.

13. Just as words may be synonyms (*sad, unhappy*), so may emoticons. Thus **:–>** and **:–)** are both used to mean "just kidding."

    A. If you are a user of electronic communication, try to think of three instances where different emoticons have approximately the same meaning.

    B. Emoticons may also be ambiguous, that is, subject to different interpretations. You may have discovered that in the previous exercise. Cite three instances where a single emoticon may be given two different interpretations.

14. Make up five or ten emoticons along with their meaning. Don't just look them up somewhere. Be creative! For example, **3:>8** to mean "bull!"