1 Sounds and symbols

UNIT 1 THE DIFFERENCE BETWEEN SPEECH AND WRITING

1.1 Key learning areas

In this unit we will:

- discover what phonetics is all about
- explore the relationship between sound and spelling
- find out how to count the number of sounds in a word
- learn how to divide sounds up into vowels and consonants.

1.2 Introduction

When most of us think about language and speech, we tend to think about the way words are written. Because we spend so much time learning to read and spell, and are constantly told how important spelling is, we often focus on spelling rather than on speech or sound.

However, this book is about **phonetics**, the study of speech sounds. This means that throughout this book we will be thinking about the way humans produce speech, and what speech sounds like, rather than the written form of language. We are going to start in this section of the book by thinking about individual sounds, build up to see how sounds vary in words, and, in the final section, look at the things that can happen when words are put together in sentences.

In fact, one of the most important things to do in the study of phonetics is to realise that sound and spelling are very different things. As we will see in this unit, spelling is often a poor guide to a word's pronunciation.

1.3 Writing systems and pronunciation

Different languages use different types of writing. The system of Egyptian hieroglyphics was based on using a picture or symbol (known as an ideogram, pictogram or **logogram**) to represent most words. Logograms look like the object represented, so possible logograms for the words 'book' and 'leg' could be those shown in Figure 1.1. However, logograms *do not* give any clues to the way the word is pronounced (although in the hieroglyphic system other

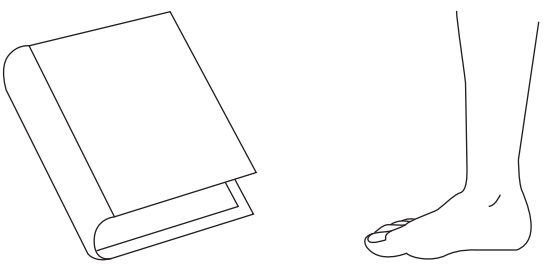

Figure 1.1 Example logograms for 'book' and 'leg'

symbols did help with pronunciation). Therefore, this type of system (known as a meaning-based or **logographic** system) requires thousands of symbols in order to represent all the words in a language. Most purely logographic systems have now died out, but many Chinese characters are logograms, modified over the years to look quite different now to the objects they represent.

In contrast, sound-based or **alphabetic** writing systems *do* try to represent the pronunciation of each word. However, some languages represent sounds more consistently in their spelling systems than others. In some languages, like Italian, a word's spelling corresponds more or less exactly to its pronunciation. In Italian, the word for book is *libro*, and leg is *gamba*, where all the letters are pronounced with a fairly consistent value (although even here there is not a strict, one-to-one correspondence of sound and letter).

However, this letter-to-sound consistency is less the case in English, as we can see just by looking at the two words we have used above. The <b> in 'book' can be silent in other words like 'debt'; the <oo> makes a different sound in 'food' in most accents; and the <k> can be silent in words like 'knight'. Similarly for 'leg', the <l> can be silent in words like 'calf'; the <e> can make a different sound in words like 'pretty'; and the <g> can make a different sound in words like 'George'. Because the English language has been influenced by many other languages throughout its history, and because all languages change over time, the English spelling system is not always a good guide to pronunciation. Of course, English words usually give a fair indication of at least part of a word's pronunciation, which is why we can read aloud words that are new to us, but there are also many inconsistencies, which we will now investigate.

Note that angled brackets < > surround letters; we will look at more types of brackets as we work through the book.

1.3.1 Many sounds to one letter

Exercise 1.1 Let us have a look at the following list of words. Focus on the letter <c> in each one. What sound does the <c> represent in each word?

face cherub control duck much city

Remember not to read on to the 'comment' section below until you have completed the exercise in full.

Comment In 'face' and 'city' the <c> represents a sound like that at the start of 'sun'. In 'duck' and 'control' it represents a different sound, like that at the start of 'kitchen'. In 'cherub' and 'much' it is joined by <h> to make yet a third sound, like that at the start and end of 'church'. The same letter can therefore represent different sounds in different words.

1.3.2 Many letters to one sound

Exercise 1.2 Now let us think about the opposite situation: how one sound can be represented by several different letters or combinations of letters.

a) Think about the sound made by the word 'I' (the pronoun referring to 'me').
b) Now think of several other words containing the same sound as the word 'I', and see how that sound is spelt in each case.

Tip You may want to think first about words that rhyme with 'I' to get you started.

Comment Words might include 'pie', 'cry', 'nine', 'high', 'buy', 'Tyne'. Note that they are all spelt differently from 'I', even though they contain the same sound. In particular, the word 'eye' sounds identical to 'I', but is spelt differently.

So, we have seen that one complication of English spelling is that sounds and letters do not have a one-to-one correspondence. The same letter can represent different sounds, and the same sound can be represented by many different letters, and letter combinations, in different words.

1.3.3 Silent and double letters

Many English words also include silent letters in their spelling, as we suggested above. Words like 'knight' have a silent <k> and start with the same sound as 'Nan', rather than with the same sound as 'king'. Words like 'psychology' and 'pterodactyl' have a silent <p> at the start, and many other letters can be silent. In addition, many English words contain double letters, and we will now think about how these are pronounced.

Exercise 1.3 Let us think about the following words that contain double letters. Say each of the words below. When you come to the part of each word represented by the double letters, listen carefully and work out if you hear two of the same sound. You may like to practise this with someone else and try to work out what you hear.

letter summer winner apple rubber offer

Comment In each case, the double letter only corresponds to one sound within the word (double letters can actually affect the way the previous vowel is pronounced, but this is not important to the current point). Again, we can see that there is no direct match between spelling and sound.

1.4 Letters and sounds

One of the key skills for a **phonetician** (a person who knows about and uses phonetics) is to divide a word into its individual sounds, which are also referred to as **segments**. Speech is a continuous and dynamic process, but, for convenience, we can think about splitting it up into smaller sections consisting of individual sounds. This is rather similar to dividing up a movie into a number of still images or snapshots.

Think about the words 'dog' and 'cat'. Each of these contains three letters and also three sounds or segments.

The sounds into which each word can be divided are as follows:

'dog': d as in 'doughnut', o as in 'off', and g as in 'goat'.
'cat': c as in 'camel', a as in 'and', and t as in 'table'.

As we have just seen in the previous section, however, spelling can be misleading, as there is not always a simple match between sounds and letters.

Exercise 1.4 Each of the words below contains three letters, but how many *sounds* are there in each word?

Take each word and try to break it down into the smallest parts possible, then count how many parts there are. Remember that we are thinking about the way the word sounds, not how it is spelt.

lie the eye owe emu fox pit try

Tip It may help to cover up each word as you work on it, so that you are not distracted by the spelling.

Comment 'Owe' and 'eye' both have only one sound. You may disagree, as you can feel your mouth moving somewhat, but these words do only contain one sound, as we will discuss in Unit 6. 'Lie' and 'the' both have two sounds; 'pit' and 'try' have three. 'Emu' has four for some speakers, but three if you do not pronounce a sound like that at the start of 'yogurt' after the 'm' sound. 'Fox' also has four sounds, as the <x> letter represents two sounds: a sound like that at the start of 'kite', followed by one like that at the start of 'socks'. In fact, if we think about the sounds at the *end* of 'fox' and 'socks', we can hear they are the same, even though the spelling is different.

Exercise 1.5 Now let us look at these words. First of all, count the letters, and then try to work out how many sounds each word contains.

tough bud ex- beige cup love ox buff

Comment Hopefully, you have found that all these words contain three sounds, despite containing between two and five letters. For example, the <gh> at the end of 'tough' represents only a single sound, as does <ff> at the end of 'buff'. <e> at the end of 'love' does not represent a sound at all, as demonstrated by the popular spelling <luv> that we use all the time in texts and emails.

As we can see, the number of written letters in a word does not always tell us how many sounds a word contains. Therefore, when thinking about phonetics, it will be very important not to think about the spelling of a word when we want to think about its sounds.

We have seen in the previous exercises that spelling and sound are separate. In fact, we can think of them as two separate levels for analysis. The technical term for the level of spelling is the **orthographic** level. The technical name for the sound level is the **phonetic** or **phonemic** level. We will discuss the difference between phonetic and phonemic much later on in this book.

1.4.1 Homographs and homophones

Another example of how the orthographic (spelling) and sound levels are separate comes from the existence of homographs and homophones.

Homographs are words that sound different but are spelt the same. For example, 'polish' may mean 'furniture polish' or refer to a person or thing that comes from Poland. These homographs are used to great effect in an episode of *One Foot in the Grave*, a BBC sitcom from the 1990s: Victor spends a long time looking for sherry from Poland because Margaret has not left enough space between 'polish' (meaning furniture polish) and 'sherry' on the shopping list. Of course, this could not have happened if she had read the list out, as the two meanings of 'polish' sound different.

Homophones, on the other hand, are words that sound the same but are spelt differently. For example 'dough' and 'doe', and 'cue' and 'queue' are homophones for all English speakers. There are other cases, however, where a person's accent will determine whether a pair of words are homophones or not, as we will see in Exercise 1.6.

It can sometimes be difficult to remember the meanings of homophone and homograph, and sometimes students get them confused, but knowing the origins of these words can help. Homo- comes from the Greek, meaning 'the same' (as in homogeneous), and we will use it for another term later on in this

book. 'graph' is also from the Greek, meaning 'writing' (as in autograph), as is 'phone', which means 'sound' (as in telephone and phonetics). So words that are homographs have the same writing (spelling), and words that are homophones have the same sound.

Exercise 1.6 As we have said above, some words may not be homophones in all accents. Let us see if the following pairs of words are homophones for you (that is, do you pronounce them the same?). It would also be useful for you to ask a friend from a different part of the country or the world for their opinion.

1	luck	look
2	witch	which
3	Shaw	shore
4	cot	caught
5	sun	son

Comment
1. For most speakers of Southern English, the first pair does not sound the same. 'Luck' is pronounced with the same vowel as 'strut', while 'look' has the same vowel as 'foot'. For most speakers of Northern English, both will be pronounced with the same vowel as 'foot', so they are homophones. However, speakers from certain parts of the north, such as Lancashire, may pronounce 'look' with the same vowel as 'goose', and 'luck' with the same vowel as 'foot' so they are not homophones.
2. The second pair will be homophones for most speakers, although Scottish and Irish speakers may produce the first sounds differently, with the first sound of 'which' having a more whistling or hissing quality.
3. The third pair will be the same for many speakers, but many North American speakers, as well as those from Scotland, Ireland or the West Country, will produce an 'r' sound at the end of the second word.
4. The fourth pair will sound different for most speakers of British English, but may be homophones for speakers of Scottish English or some varieties of North American English.
5. The fifth pair will be pronounced the same for the majority of speakers, regardless of their accent.

1.5 Accents

Later on in this book, in Unit 14, we will be discussing regional accents in a bit more detail. However, it is important to say at this point that the way a person pronounces a word will vary according to where they were born, grew up and live, as well as their 'social class'. Their age may also be an important factor,

as might the situation in which they are speaking. This book will work most often with an accent of English known as **Standard Southern British English** (SSBE). This is the pronunciation used by many people on television and radio, and by many university lecturers and teachers. It is basically the pronunciation of fairly educated speakers in the South East of England. It is not quite the pronunciation used by the British royal family, or by those who have attended a public school. We will refer to that pronunciation, which is used by around 3 per cent of the population of England, as **Received Pronunciation** (RP).

Many people will find that their pronunciation is similar to SSBE in many respects. However, we must also recognise that not everyone speaks SSBE, so exercises and examples will try to comment on accent variation where possible.

It is also crucial to point out that this book does not recommend any particular pronunciation or accent. The aim of this book, and of phonetics in general, is to describe what occurs in any accent, rather than to prescribe what *should* occur. SSBE is used as a convenient reference, as it is the accent with which the majority of the English-speaking population are familiar (at least through television and radio), and the accent to which many non-native learners aspire.

1.6 Introduction to transcription – consonants and vowels

One of the key skills of a phonetician is **transcription**. As we have seen, spelling cannot tell us unambiguously how a word should be pronounced. Transcription, therefore, provides us with a shared system of symbols that only ever refer to one sound and that allow us to write down pronunciation clearly and consistently. We will begin to look at these symbols in the next unit. For now, let us start to do some transcription by thinking about a major division in speech sounds: vowels versus consonants. Again, it is important not to think about spelling, as the terms 'consonant' and 'vowel' mean something different when we are discussing spoken language. In spelling, for example, we use twenty-one consonants, but in spoken English we use around twenty-four depending on our accent. Likewise, in spelling we use five vowels, but in spoken English we use around twenty.

We will consider the differences between consonants and vowels in detail in later units. In brief, though, spoken **consonants** are sounds made with a lot of constriction in the mouth, so that the air coming up from the lungs gets squashed. Consonant sounds also tend to occur at the start and end of syllables – for example, like those at the beginning and end of the words 'dog', 'cat', 'pen' and 'tub'. **Vowels**, on the other hand, are sounds made with the mouth quite open, and they occur in the middle of syllables. For example, the sounds in the middle of the words in the previous list are all vowels. Vowels can also occur in

isolation: the words 'eye', 'are' (for SSBE speakers) and 'owe' all consist of single vowel sounds, without any consonants surrounding them.

1.7 CV structures

We can begin to think about transcription by noting down the sounds in a word as either C for consonant or V for vowel. For example, 'dog', 'cat', 'pen' and 'tub' can all be represented as CVC, since they start and end with a consonant and have a vowel in the middle. Words like 'eye', 'are' and 'owe', in contrast, are all represented as V, since they only contain one vowel sound.

Exercise 1.7 What are the CV structures of the following words? It may help you to try to count the sounds in each word first, and to remember not to think about the spelling.

glass think hatch flute robber ring

Comment 'Glass' is CCVC, as the double letter <s> represents only one sound. 'Think' is CVCC, as the <th> letters represent a single sound. 'Flute' is CCVC, as the <e> at the end is silent (and tells us only to make the <u> a long sound). 'Hatch' is CVC, as <tch> at the end of the word represents only a single sound. 'Ring' is either CVC or CVCC, depending on your regional accent. Most English accents do not pronounce the <g> at the end of 'ring', but accents of Birmingham and surrounding areas may do. Finally, 'robber' is either CVCV or CVCVC. The double <b> only represents one sound, but accents vary as to whether they pronounce the final <r>, as we will explore now.

1.8 Rhotic and non-rhotic accents

Some speakers pronounce an 'r' sound at the end of words like 'robber' (as in the previous exercise), and some speakers do not. This is largely down to the speaker's regional accent. Speakers who do pronounce an 'r' in this position are called **rhotic** speakers, and will always pronounce an <r> whenever it occurs in the spelling of a word. Others will only pronounce an 'r' sound when the letter <r> occurs at the beginning or in the middle of a word, that is, in front of a vowel. These speakers are referred to as **non-rhotic** speakers. People who come from the West Country in England, Ireland, Scotland and parts of the United States are likely to be rhotic, whereas those from Australia, London and the South East, and northern parts of England are likely to be non-rhotic – thus SSBE is non-rhotic.

Exercise 1.8 It would be useful to take some time now to think about whether you pronounce an 'r' sound in words like 'car'. This can be confusing, as the spelling suggests that there *must* be an 'r' sound. However, consider if your tongue stays

still after the vowel. If it does, then you speak with a non-rhotic accent; if it does not, and you raise the tip or middle of your tongue, then you speak with a rhotic accent.

Comment Rhoticity will be mentioned at several points in the book, as it is one of the major divisions between accents of English. If you are unsure about whether you speak with a rhotic accent or not, it would be useful to ask a phonetics teacher to help you decide.

1.8.1 The history and status of 'r'

In past times, all speakers in England would have been rhotic and would have pronounced an 'r' at the end of words like 'robber' and 'car', and it is this pronunciation that was taken to America on the *Mayflower*. However, the rhotic pronunciation was subsequently lost in most of England, and therefore did not travel to Australia with the colonists.

Now the pronunciation of 'r' at the end of words is sometimes a matter for social comment. People in the UK often focus on this feature in West Country speech, and associate rhotic pronunciations with people who have traditional country professions, such as farming. The situation in North America is rather different, as it can be seen as prestigious to speak with a rhotic accent, the opposite situation to that in the UK. This disparity demonstrates that there is nothing inherently prestigious or otherwise about a particular pronunciation; it is the views of the speech community that give a sound or accent its status. The 'r' sound, in particular, has a very interesting history in English (and in other languages) that we will touch on at various points throughout this book.

1.9 More CV structures

Exercise 1.9 The following words are longer than those in Exercise 1.7. Try to produce CV structures for them.

Jupiter haricot television elephant necessary

Comment 'Jupiter' is CVCVCV for non-rhotic speakers or CVCVCVC for rhotic speakers. 'Haricot' is CVCVCV, as the final <t> is silent. 'Television' is CVCVCVCVC, as the two vowels <io> represent a single sound. An alternative pronunciation for 'television' is or CVCVCVCC. Speakers vary as to whether they produce a vowel before the final sound in words such as 'television' and 'puddle'. If there is no vowel, then the final sound is referred to as syllabic. We will return to this idea later, when we think about syllabic consonants (in Unit 8),