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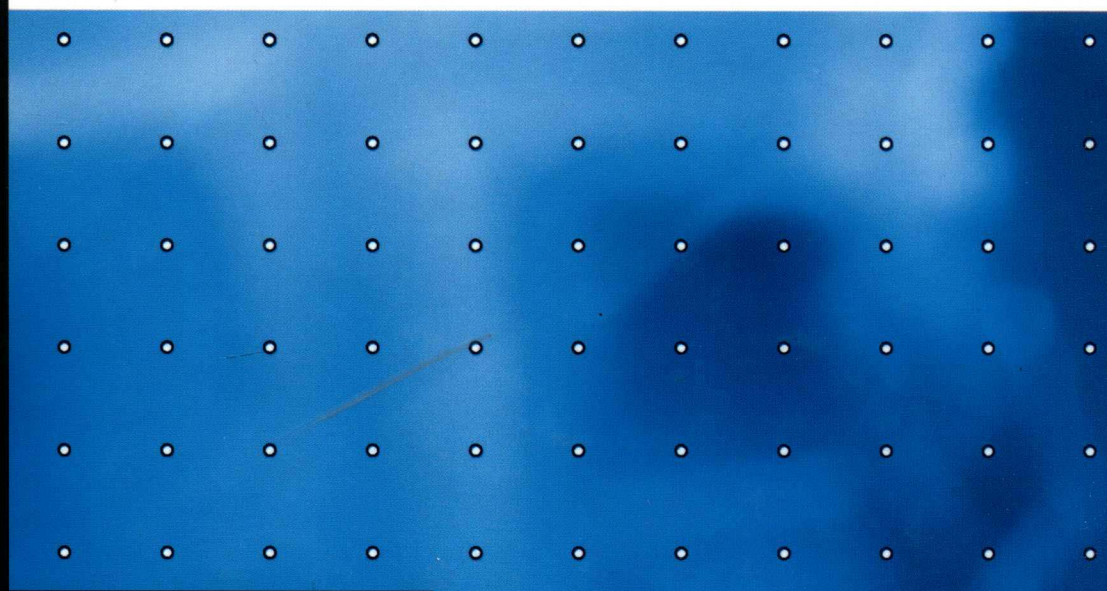
The Sound Structure of English

AN INTRODUCTION



Chris McCully

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The Sound Structure of English

The Sound Structure of English provides a clear introduction to English phonetics and phonology. Tailored to suit the needs of individual, one-term course modules, it assumes no prior knowledge of the subject, and presents the basic facts in a straightforward manner, making it the ideal text for beginners. Students are guided step-by-step through the main concepts and techniques of phonetic and phonological analysis, aided by concise chapter summaries, suggestions for further reading and a comprehensive glossary of all the terms introduced. Each chapter is accompanied by an engaging set of exercises and discussion questions, encouraging students to consolidate and develop their learning, and providing essential self-study material. The book is accompanied by a companion website, which helps readers to work through specified in-chapter problems, suggests answers to end-of-chapter exercises, and contains links to other sites of interest to those working on English sound-structure. Providing the essential knowledge and skills for those embarking on the study of English sounds, it is set to become the leading introduction to the field.

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Books in the series
The Sound Structure of English Chris McCully
Old English Jeremy J. Smith

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October 2008

A note on using this book

In what follows you'll find a book of eleven chapters, whose contents are detailed above. Throughout each chapter I've set what are intended to be thought-provoking questions. Each question appears in **bold** font and in boxed text. Sometimes I've begun to answer such questions in the text that follows them, but more usually I've not answered them within the covers of this book. You will, however, find that such questions are useful to discuss in seminars, or even outside classes. You'll also find a fuller set of answers in the web pages that accompany the book. You will need to open the following URL: http://www.cambridge.org/9780521615495.

Similarly, at the end of each chapter you'll find a set of more formal exercises. These are labelled e.g. **exercise 1a, exercise 3d** and so on. These also appear in bold font, and in text boxes. Again, I have sometimes offered commentary, but more often I've placed a discussion of them in the relevant web pages.

Although the book can be used as a stand-alone textbook *you won't get the best out of it unless and until you access the web pages that complement it.*

You'll also find a glossary in the apparatus which concludes the book. The glossary contains all those terms which, on their first appearance in the text, are set in **bold** font. In the glossary I've given brief (and, I hope, uncontroversial) definitions to these terms, and have also, where relevant, included a page or section reference detailing where those terms appear in this book. There's also a full index, again in the concluding apparatus, so you shouldn't get lost.

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CHAPTER **1**

Introduction

In this chapter ...

In this chapter we explore a system for thinking about, and then describing, English speech sounds. We will see that there are important differences between the usual written system of English and how the system of sounds is structured – so many differences, in fact, that the familiar written system of English could never be used as a transcription of either the structure that lies behind speech or the occurrence of English speech sounds themselves. As we'll see, in order to work systematically with the sounds of English we need to analyse both *the structure that lies behind speech* (we call this *phonology*) and the nature and occurrence of speech sounds themselves (we call this *phonetics*).

Here, too, we begin to look at some of the principles that govern phonology: the *distribution* of sounds, and how they *contrast*. We draw an analogy between this system and the system, or timetable, of trains, and see that to study phonology is to study part of the 'timetable of language'.

1.1 Written and spoken English

It's critical for our purposes to distinguish between the *written* and the *spoken* systems of English. Although it contains significant clues as to how English was once pronounced, English spelling is unreliable as a guide to recent and present-day pronunciation, so much so that George Bernard Shaw once suggested that the familiar word *fish* should be spelled as <ghoti> – <gh> from *enough*, <o> from *women*, and <ti> from words such as *motion*. Consider also the vowel sound (or sounds) one produces in words such as <oar>. For many speakers of English, particularly those who don't typically pronounce the final *r* of <oar>, the vowel represented by the written symbols <oa> is also found in words such as <auk>, <ought>, <sure> and <ford>, where it's represented by the *written* symbols <au>, <ou>, <ure> and <or>.

> The above paragraph introduces a useful convention: when we analyse English, it's convenient to refer to *written* (or *common alphabetic*) *forms* by inserting them within angled brackets, < ... >. When we come to analyse the *sounds* of English, we will insert these into different brackets, either / ... / or [...], depending on the kind of transcription of sound we are making (see below, 1.6 and 1.7).

We're usually so familiar with the written form of English that it can mislead us into making wrong assumptions about the sound system. The word <school>, for example, conventionally begins with three common alphabetic symbols, <s+c+h>, but in terms of *sounds*, the word actually begins with two **consonants** (roughly, and just for the moment, an 's' sound and a 'k' sound). Similarly, the word <shore> begins with two symbols, <s+h>, but only one consonant in speech (a kind of 'sh' sound – for the relevant symbol, see chapter 2). And again, for many (though by no means all) speakers of English, the final <r> of words such as <oar>, <ear>, <car> isn't pronounced; for many (though by no means all) speakers of English the final <g> of words like <king>, <song>, <fishing> isn't pronounced. In your studies, as analysts of the English language and its many different varieties, **it's always important to distinguish very carefully between the written and the spoken forms of English.**

> **Can you construct other, possibly unusual combinations of letters which 'spell' English words, e.g. <ghoti> = 'fish', <aughturnun> = 'afternoon' (<augh> from <dr*augh*t>, <ur> from <aub*ur*n>, <un> from <l*un*-atic>)?**

1.2 More on written and spoken English: the primacy of speech

Although it's not the primary object of attention here, the written system of English doesn't lack interest. Studying the physical shapes of the letters, analysing how and why such letter shapes differ from each other, and working out how the alphabet developed, is to study **graphology** and its history. The earliest English alphabets were in fact modified forms of alphabetic shapes used for written Latin, but also incorporated some characters (symbols) inherited from the Germanic **runic** alphabet. (For a brief introduction to runes, see Graddol *et al.* 1996: 42 or Crystal 1995: 9 – though it's worth pointing out that the runic alphabet was itself a special adaptation of Greek and Latin symbols.) It's also the case that many present-day English spellings give us significant clues to the spoken histories of the words in question. It's reasonable to suppose, for example, that written vowel shapes like <ea> were, at some point in the history of English, pronounced differently from vowel shapes written as <ee>. That is, <meat> was once pronounced differently from <meet>, despite the fact that in many present-day varieties of English these words are **homophones**. (Homophones are words that sound identical, despite differences in spelling: other examples in my own variety of spoken English are <sea> and <see>, <site> and <sight>.) So spellings can be and often are used by linguists as important evidence bearing on how a language's sound system has developed, and how its history may be reconstructed.

There's another reason why analysing and transcribing speech is an activity properly distinct from the analysis of written language. Human beings learn to speak long before they can write (even assuming they ever learn to write). Speech is for many of us the primary, and certainly the most overt, mode of human communication, while writing systems usually begin life as an attempt to capture speech sounds, implying that speech is a primary medium, while writing is derived from it.

Writing is usually very much more conservative than speech. The English language is incessantly, though often imperceptibly, changing, and these changes often show up first in speech, rather than in the written system. (Many changes never reach the written system at all.) For example, in the last forty years there has been a definite shift in how the vowel shape represented by <a> is pronounced in some prestige varieties of British English (BrE, and on the abbreviation, see the boxed text below) in words like <cat>, <hand>, or the first – and, in BrE, stressed – syllable of <garage>.

I will be using some abbreviations in this book. 'British English' will be abbreviated as 'BrE', and 'General American' – a variety that typically includes the pronunciation of 'r' after vowels and finally in a word (*fourth*, *door*) – as 'GA'. I will explain abbreviations, and any special symbols used here, in boxed text as we work.

Such a shift in pronunciation isn't at all represented in changed spellings: the spellings of the words affected have remained constant. This means that often enough, students of language look to speech, not writing, when they are thinking through how languages have changed over time.

How many other pairs of homophones can you find in your own variety of spoken English?

The reason these points are being made now is that many students beginning their study of the sound structure of English are so accustomed to thinking of the written system of the language as in some sense 'primary' that they may make faulty generalisations about the sound structure of the language they speak. For example, try the following exercise. Construct a list of ten English words – preferably, words comprising one and only one syllable – that begin with:

- one consonant
- two consonants
- three consonants

This simple exercise contains the word 'consonant'. The term implies something spoken ('con+sonant' = 'sounding together'). The list of words beginning with one consonant generally presents no problem: **monosyllables** (i.e. words of just one syllable) such as *dog*, *cat*, *house*, *sit*, *pin*, *tar* and *cup* make their appearance. But with the list of words that begin with two consonants, problems arise – and they're almost invariably problems stemming from the fact that you are still thinking in terms of the *written system* of English. 'Words that begin with two consonants? Well... How about *ship*?' The difficulty there is that <ship> certainly appears to begin with two written consonant shapes, but in terms of the *sound structure* of the language, the word actually begins with just *one* consonant. The following lists make this point clear:

Words only *appearing* to begin with two consonants

ship	(graphic <sh> represents *one* speech sound)
chase	(graphic <ch> ditto)
thigh	(graphic <th> ditto)

there (graphic <th> ditto)
phone (graphic <ph> ditto)

Words only *appearing* to end with two consonants

fish (graphic <sh> represents *one* speech sound)
bath (graphic <th> ditto)
Bach (proper name: graphic <ch> ditto)
graph (graphic <ph> ditto)

Things get more complicated if we ask about words that begin and/or end with three consonants. 'Three consonants at the beginning... Well, what about *school*?' The problem is that the word *school* appears to begin with *three* written consonant shapes (<s>, <c> and <h>), whereas in terms of the word's sound structure, *only two* consonants are present. The following lists emphasise this pseudo-problem:

Words only *appearing* to begin with three consonants

school (graphic <sch> represents *two* speech sounds)
phrase (graphic <phr> ditto)
shrew (graphic <shr> ditto)
sphere (graphic <sph> ditto)

Words only *appearing* to end with three consonants

graphs (graphic <phs> represents *two* speech sounds)
laughs (graphic <ghs> ditto)
baths (graphic <ths> ditto)

The point bears repeating: from the beginning of our study of the sound structure of English we need to distinguish carefully between the written and spoken systems of the language. Our familiarity with the written system can sometimes mislead us into making wrong generalisations about the sound structure of the language, or into constructing transcriptions of sound which are inappropriate. Notice that we're not saying that familiar graphic conventions – the conventions of written English – are 'wrong'. We're just saying that the familiar written system of English doesn't offer us the *symbolic consistency* or the *adequacy* we need in order to describe and transcribe the *system* that underlies the way we speak our varieties of English.

1.3 Speech as a system

In the paragraphs above we've begun to use the word *system* – the 'system of writing', the 'sound system of English'. What allows us to make the claim that the sound structure of present-day English is a 'system'?

As we'll see, speech sounds are themselves organised within the overall structure of the English language: certain speech sounds **contrast** with other speech sounds, and such contrasts are meaningful. In many spoken varieties of English, for example, there's a perceptible *spoken* difference between a vowel like that represented by the <i> of <sit>, and one like that represented by the <ea> of <seat>, the <e> of <met> and the <ee> of <meet>. <sit> and <met> contain **short vowels** (we'll define the term 'short' more precisely later, see in particular chapters 9–10), while <seat> and <meet> contain **long vowels.** The difference in length is a *meaningful* contrast.

Speech sounds also tend to behave *predictably*. For example, the speech sounds corresponding to the beginning of the written word <pray> form the beginning of a well-structured syllable (about which you can read more in chapter 6), but the speech sounds corresponding to *<rpay> (see boxed text below) do not.

> The asterisk occurring before a particular linguistic form indicates a form that isn't merely non-occurring, but deviant. For instance, the made-up word <brip> doesn't appear to occur in any variety of English, *even though it is well formed* in terms of its sound structure. Its non-occurrence is merely an accidental gap. On the other hand, *<rpay> is ill-formed: a 'p' simply cannot follow an 'r' in order to begin an English word. Such an ordering would violate the underlying principles of how English speech sounds are ordered.

Similarly, the speech sounds corresponding to <grinds> form a well-structured syllable, but those corresponding to *<rgidns> do not; <blue> is fine, but *<lbue> isn't. If you're asked why the asterisked forms are deviant or otherwise unacceptable, you might reply that they're 'difficult to say' or 'impossible to pronounce'. There's a reason for that difficulty or impossibility: there are *principles* operative within the spoken system of English that determine which speech sounds can co-occur with other speech sounds. Knowing those principles is part of our wider (and usually tacit) knowledge of the structure of the English language. Analysis of *spoken* English can reveal a great deal about what those principles are, and how they might be formulated and studied.

> **By observing your own variety of spoken English, how much data could you amass to support the claim that your use of that spoken system was largely *systematic*?**

1.4 *Accent* and *dialect*

Another reason why we might want to study the sounds of English systematically is so that we can analyse the richness of English **accents**. We need to discriminate between the terms *accent* and **dialect**. *Accent* refers to features, patterns and phenomena belonging to variations in *speech*. For example, three speakers of English from different parts of the world may all pronounce the same word – say, the word spelled <path> – rather differently: a speaker of a Northern variety of British English (a speaker from, say, Leeds) may characteristically pronounce the word with a short vowel, a speaker of Southern Standard British English may pronounce it with a long vowel, and a speaker who has learned English as a second language may pronounce the final 'th' sound rather like some variety of 't'. These variations are variations of *accent*. Professional linguists are interested in precisely these variations, and in answering questions about them. Why do they occur? Where did these variations originate? How historically stable are they? Linguists are *not* interested in making personal judgements about the 'correctness' or otherwise of particular English accents. Like it or not, *every* user of English 'speaks with an accent'. Questioning *why* those accents exist, and asking *how* they are patterned, are the proper concerns of linguists. In this field of study, as in any other science, value judgements are irrelevant.

If the term *accent* refers to spoken features of English, then *dialect* refers to variations that include accent, but also include features of syntax and vocabulary. (In linguistics the word for 'vocabulary', or our 'mental dictionary' of meaningful words, word parts and phrases, is **lexicon**.)

To make this clearer, consider the following sentence (in linguistics, such a sentence is called a **substitution frame**) and fill in the indicated gap with a demonstrative pronoun – a word such as 'those' or 'them':

He caught the pike between_____weeds

(A pike is a predatory freshwater fish.) Clearly, you could insert the word *those* into the frame. But for many speakers of English, you could also insert *them* ('them weeds'). For other speakers, you could insert the form *dey* (and such speakers would also tend to use the form *de* for the definite article – *de pike*). Such variations do not just involve pronunciation, they also involve **grammar** – in this instance, the system of pronoun forms. As such, the variations (including accent, but also embracing other syntactic features of English) belong to the study of *dialect*. They are *dialectal variations*. (Note: please distinguish between the term *dialectal* and the term *dialectical*. This last term belongs properly to philosophy, rather than to linguistics.)

Other examples of dialectal variation: for many speakers of English, *I need this plug mending* is a perfectly usual structure – but not for speakers of some varieties of Scots English, for whom *I need this plug mended* would be normative. This difference, a syntactic difference involving the inflectional **morphology** (roughly, the word-building) of verb forms, is dialectal. Or again, I could refer to an acquaintance *raising her little finger*, while you might normatively refer to her *raising her pinkie*. The difference, between *little finger* and *pinkie*, is a variation that is said to be *lexical* (involving the lexicon, the 'mental dictionary' of a speaker).

Every English speaker uses some form of dialect. By historical accident, political choice, or societal pressure (or perhaps all three), the particular dialect used may have become some kind of *standard* form of English, a prestige form, a form taught and transmitted ('Don't say *them* weeds, Christopher! Say *those* ...'). But – and uncomfortably for self-appointed guardians of the 'purity of the English language' – 'standard' forms of English are themselves dialects, and for dialect speakers, whether they be from Somerset, Scotland or Singapore, their native dialect is a perfect communicative medium, neither better nor worse than other dialects. Just as they attempt to study accents with scientific detachment and impartiality, so linguists bring the same analytical detachment to the study of dialect. The questions that interest the linguist are: How did this dialect originate? How has it changed over time? What factors have caused it to change? What is the relationship between spoken and written forms of this particular dialect?

What *accent* of English do you think you use? Would your immediate circle of friends and family agree that you use that form of accent? (Try asking them.) What *dialectal features* can you find in your own variety of English?

1.5 More on systems and structure

I've talked about structures and systems, and about how the spoken system of English is rather different from the written. But what sort of object *is* the sound structure of English? How can we study it? What does it mean, 'making generalisations about' the behaviour of certain items within that system?